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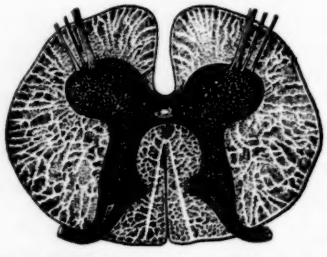

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Bradshaw Lecture

ON

THE MUSCULAR DYSTROPHIES, SYMPATHETIC SYSTEM, AND ENDOCRINE GLANDS.

Delivered before the Royal College of Physicians of London on Nov. 5th, 1925,

BY EDWIN BRAMWELL, M.D. EDIN., F.R.C.P.,

PHYSICIAN TO THE ROYAL INFIRMARY AND MONCRIEFF-ARNOTT PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY, EDINBURGH.

I PROPOSE to confine my remarks to the group commonly denoted as muscular dystrophy with special reference to the ætiology of these disorders. I shall submit to you evidence from various sources which appears, to me at least, to suggest that the muscular dystrophies may not be myopathies or primary diseases of muscle, as they are generally regarded at the present time, but that their symptomatology may perhaps be determined by disease of the sympathetic nervous system. I shall also refer to the question of a possible relationship between the muscular dystrophies and the endocrine glands. While I admit that the evidence which I shall adduce is suggestive rather than conclusive, for it is based to some extent on observations which require further corroboration, my remarks may prove of value should they serve to focus attention upon points calling for elucidation in the determination of this problem.

The observation, that in the majority of cases of muscular dystrophy the sternal portion of the pectoralis major wastes while the clavicular portion escapes, is well known to all clinicians. It has often occurred to me that this very striking fact must afford a clue to, or at any rate must be taken into consideration in any explanation which may be advanced to account for, the incidence of the muscular involvement in these disorders. I shall in the first instance approach the problem from this standpoint, but it may be well that I introduce my remarks with a brief and pertinent historical prelude with special reference to the ætiological considerations which it is my present purpose to discuss.

THE RECOGNITION OF THE MUSCULAR DYSTROPHIES.

Aran's communication,[1] published in 1850, was the means of directing general attention to the progressive muscular atrophies. Ten years later Luys (1860)[2] observed changes in the grey matter of the spinal cord in cases of the kind, and in 1874 Charcot expressed the opinion that the paralysis and wasting in cases of progressive muscular atrophy were due to a chronic degeneration of the anterior horn cells of the spinal cord. This view, which was for a time opposed by Friedreich and others, who regarded the cell changes in the spinal cord as secondary, before long met with general acceptance. Various clinical types of progressive muscular atrophy had, however, been previously differentiated in which no spinal cord changes had been observed. Thus Meryon (1852),[3] in a communication entitled a Granular and Fatty Degeneration of the Voluntary Muscles, described four cases of progressive muscular atrophy in brothers, in one of which, examined post mortem, the muscles presented the appearances referred to in the title of his paper, while no abnormality was found in the spinal cord. Then in 1861 Duchenne of Boulogne published his classical description[4] of pseudohypertrophic paralysis. Again in 1875 Leyden[5] reported certain cases of muscular atrophy, occurring in families, to which he applied the designation "hereditary type of progressive muscular atrophy." Gowers,[6] whose monograph upon pseudohypertrophic paralysis appeared in 1879, clearly recognised that "hypertrophy and atrophy may exist in different proportions, and there are cases which connect the two extremes—in some enlargement of many muscles, and in others wasting of all." Erb,[7] of Heidelberg, in 1883 described his juvenile type, and three years later (1885) Landouzy and Dejerine[8] a form, which differed merely from the juvenile type of Erb in that the facial musculature was involved, to which they applied the term "facio-scapulo-humeral." The recognition of the types last mentioned is of especial interest, since progressive muscular atrophy in the adult had previously been believed to be of myelopathic origin.

Erb[9] was chiefly responsible for placing our knowledge of these disorders upon a sure footing. Basing his conclusions upon a large series of cases which he had personally examined both clinically and pathologically, Erb laid it down that there are two kinds of progressive muscular atrophy, one in which there is a degeneration of the anterior horn cells to which the symptoms are to be directly attributed, and another in which no such changes are observed. To the latter group he applied the term muscular dystrophy. Further, he demonstrated that these two groups of cases differed not only in the distribution and nature of the atrophy, but also in the structural changes presented by the muscles. Again, he pointed out that the types described by Meryon, Leyden, Moebius, Duchenne, Landouzy and Dejerine, and himself were merely variations of the same disease.

THE PRIMARY MYOPATHIC VIEW A NEGATIVE CONCEPTION.

While the earlier writers agreed as to the absence of changes in the spinal cord, numerous cases of muscular dystrophy have since been reported in which a reduction in the number and size of the anterior horn cells has been observed. These changes have, however, been regarded as of secondary origin. Thus Gordon Holmes,[10] who in 1908 reported a case of pseudohypertrophic paralysis in which such changes were present, and reviewed the literature up to that date, writes:—

> "The histological changes in the ventral horns in my case were, it seemed to me, quite distinct from the degenerative cell changes I have found in any of the many spinal amyotrophies which I have examined, and the muscular affection exceeds them very much in both degree and extent . . . the most probable explanation of these cases is that the neural changes are secondary to the primary muscle disease."

Further, he adds:—

> "It appears to me very improbable that the myopathies have a neuropathic basis, indeed, I cannot see how this contention can be logically sustained. In the first place, there is no reason why the muscles of certain individuals should not possess a morbid tendency to regressive changes quite as well as parts of the nervous system, and, secondly, in the majority of cases which have been examined no histological evidence of nervous change to which the muscular atrophy could be secondary has been found."

The generally accepted view according to which the muscular dystrophies are of primary muscular origin is, however, a negative conception, for it is essentially based upon the negative findings in the nervous system. It is, indeed, interesting to note that Landouzy and Dejerine suggested in 1886[11] that although the nervous system has been found normal in muscular dystrophy, it may nevertheless be altered in a way we are unable to detect, an opinion which was also held by Vulpian. Again Erb wrote in 1890:—

> "I cannot avoid the suspicion that after all the affection may be dependent upon the nervous system. It is tempting to suppose, as I formerly expressed it, that we have to do with a kind of tropho-neurosis having its origin in the trophic centres of the cord—a disturbance of the function of these centres which finds its expression in the very complicated muscle changes of the disease. A further rich experience, much thought expended upon the question, and particularly the above described anatomical findings (he refers to the changes in the muscles observed in poliomyelitis), have served to confirm me in my scruples."

New data have of late emerged which have a bearing on this problem, and I shall now direct your attention to certain apposite facts and discuss the conclusions which would appear to be legitimately derived from them.

INFERENCES FROM COMPARATIVE ANATOMY.

The incidence of the muscular involvement in the common types of muscular dystrophy—the atrophic type without muscular enlargement, the pseudo-hypertrophic paralysis of Duchenne, the juvenile type of Erb, and the facio-scapulo-humeral type of Landouzy and Dejerine—is strikingly similar. (I do not include the distal type, since I am not satisfied that these cases are distinct from peroneal muscular atrophy. Again, I have omitted myatonia congenita, regarding which there is still considerable difference of opinion, as also myotonia atrophica, which I am inclined to think is a distinct disease.) Although great individual variations are met with, certain muscles are very commonly picked out, while others are as commonly spared. The question arises, Does comparative anatomy afford any explanation of the facts? A study of the earlier stages of the disease is, you will agree, more likely to prove informative than at a later date when the atrophy has become generalised. The case of a miner at present under my care provides a useful illustration for discussion, since the atrophy is very localised and complete, although its distribution is in some respects exceptional.

The patient, aged 46, is a particularly muscular man. He has suffered from no illness of a serious nature, nor, so far as he is aware, have any cases similar to his own occurred among his relatives. He states that, some ten years ago, he first noticed slight "stiffness" about the shoulders. The condition has, he thinks, become slowly more pronounced, but that it has not until recently given rise to any serious disability is evident from the fact that almost up to the time of his admission to hospital he was capable of doing a full day's work.

On examination a very localised but very complete bilateral atrophic paralysis is present. The muscles involved are the latissimus dorsi, the trapezius (including the upper third), the sternal portion of the pectoralis major, the serratus magnus, and the rhomboids, all of which are much wasted and absolutely powerless. The levatores anguli scapulæ are somewhat weak and wasted, especially on the right side. The brachioradialis is absent. All the muscles of the body apart from those mentioned are well developed and powerful, including the sternomastoid and the clavicular portion of the pectoralis major, the teres major, spinati, deltoid, and the muscles of the trunk and lower limbs. No fibrillary tremors are to be observed. There is no sensory loss and no alteration in the reflexes.

The atrophic paralysis in this case is limited, with the exception of the brachioradialis, to the extrinsic muscles of the shoulder-girdle. All these muscles are indeed completely paralysed excepting for the sternomastoids and the levator anguli scapulæ (the last-named muscle being somewhat weak and atrophic), and yet the patient suffers little inconvenience in consequence. The distribution of the atrophic paralysis if limited is, you will agree, characteristic of muscular dystrophy, although the fact that the levator anguli scapulæ and the upper third of the trapezius are affected is unusual, for these muscles are not, as a rule, involved until the later stages of the disease. Does comparative anatomy throw any light upon the localisation of the atrophic paralysis? Those of you who have read Sir Arthur Keith's fascinating Hunterian lectures[12] upon Posture: its Evolution and Disorders, will recall that he points out that in the pronograde animal the weight of the body is transferred to the upper limbs by a series of muscular slings or hammocks which are constituted by the extrinsic muscles of the shoulder-girdle, and that in the arboreal anthropoids, in which the arms and shoulders have to sustain the weight of the trunk, certain modifications take place in the musculature of this region. On the other hand, in man the trunk has to sustain the weight of the shoulders and arms, and "consequently we have here only to suppose a perfecting of a supporting reflex mechanism for the maintenance of the shoulders—a human character of late evolution." Now, is it not a striking fact that in the great majority of cases of muscular dystrophy it is the extrinsic muscles of the shoulder-girdle—the latissimus dorsi, the lower part of the pectoralis major and trapezius, the rhomboids, and the serratus magnus—which are prone to suffer: while, on the other hand, I think you will agree that the sternomastoid, as also the upper part of the trapezius and levator anguli scapulæ, the latter being muscles which constitute part of the sling system, but which have acquired new functions in relation to the supporting reflex mechanism necessitated by the erect posture, are in the earlier stages at any rate but seldom involved.

The escape of the clavicular portion of the pectoralis major calls for separate consideration. The pectoralis major is referred to by Dr. C. E. Beevor[13] as "one of the most interesting muscles of the body." As Wilfred Harris[14] has pointed out, the clavicular head below the gibbon is replaced by the anterior fibres of the deltoid. Indeed, Sir Arthur Keith indicates that the clavicular head of the pectoralis major is a new muscle—a late development in the process of evolution.

The absence of the brachioradialis in this case is of much interest. This muscle is, in my experience, very often absent in the muscular dystrophies. I have met with three additional cases in which it was absent, while all the other muscles of the forearm and upper arm were intact. The brachioradialis is really an upper arm muscle. W. Colin Mackenzie[15] points out that while in some animals, for example, the wombat, it is a muscle of great importance, in man it is "struggling hard to retain its place in the human economy." It would indeed appear in man to be a retrograde or regressive muscle with a comparatively unimportant function. And yet Sir Arthur Keith writes me it is a muscle which "is wonderfully constant—never absent."

These considerations would appear to suggest that it is the regressive or primitive muscles, as exemplified by the brachioradialis, which are especially predisposed in the muscular dystrophies, while, on the contrary, a muscle which is acquired late in the process of evolution—as is the case with the clavicular portion of the pectoralis major—and muscles which take on new functions in relation to the erect posture—as, for instance, the sternomastoid and upper part of the trapezius—escape.

CONCLUSIONS DERIVED FROM EMBRYOLOGICAL OBSERVATIONS.

The well-known observations of Babinski and Onanoff,[16] reported many years ago, are of much interest in relation to the problem under discussion. These observers found that the muscles of a five-months' fœtus varied greatly in their degree of development. Further, they noted that it is those muscles in which development is most advanced which are especially prone to suffer in the muscular dystrophies. In other words, their observations indicate that there is an intimate association between the degree of rapidity of the muscular development and the degree of predisposition to muscular dystrophy. Babinski and Onanoff employ figures with which to indicate the degree of development of the individual muscles, and tabulate their results as follows:—

Hand: muscles of thenar eminence, 2; muscles of hypothenar eminence, 2.

Forearm: brachioradialis, 5; extensors and pronators, 3; flexors of the fingers, 2.

Upper arm: biceps, 3; triceps, 3.

Shoulder, intrinsic muscles: deltoid, 4; infraspinatus, 3; subscapularis, 3. Extrinsic muscles: serratus magnus, 5; latissimus dorsi, 5; rhomboids, 5; adductor portion of trapezius, 5; clavicular portion of trapezius, 2.

Face: orbicularis palpebrarum, 5; masseter, ?; muscles of the auricle, 1.

Lower limbs: quadriceps, 5; calf muscle, 3; anterior tibial, 5.

It is interesting to compare these observations upon the development of the muscles in the fœtus with the incidence of the muscular involvement in the muscular dystrophies and with the observations on comparative anatomy to which I have just referred.

Incidence of Muscular Involvement Regarded from the Standpoint of Function.

The problem of the incidence of muscular involvement may also be considered clinically from the point of view of function. Sir Charles Sherrington [17] has pointed out that while in various invertebrates individual muscles are specially differentiated for the execution of movements and the maintenance of posture, in the vertebrates, on the other hand, "the same muscle is used for the two purposes, though some muscles are predominantly concerned with one, some with the other function." Again, in the case of certain vertebrates, the rabbit, for instance, as Ranvier long ago demonstrated, some muscles—those which are obviously concerned more especially with active movement—are paler in colour than others which are obviously more especially concerned with the function of fixation. In man, however, there is no such difference in the naked-eye appearance of the individual muscles, nor, so far as I am aware, have two kinds of muscle-fibre been differentiated. Consequently, while further observation may serve to establish the presence of two kinds of fibres in the muscles of man, the possibility must be admitted, in the absence of evidence to the contrary, that the two functions—execution of movement and maintenance of posture—may be subserved by the same muscle-fibre.

The distribution of the muscular involvement in the muscular dystrophies suggests, I think, that muscles which are of special importance as fixators in relation to the maintenance of posture are predisposed, whereas muscles more especially concerned with active purposive movements of which we are more directly conscious are either spared or only suffer at a later date. We have already seen that the extrinsic muscles of the shoulder-girdle are commonly in great part involved, although the sternomastoid, upper part of the trapezius, and the levator anguli scapulæ as also the clavicular portion of the pectoralis major, which is, as I have mentioned, an intrinsic muscle, as frequently escape. Again, in the juvenile and facio-scapulo-humeral types the upper arm and thigh muscles are also affected. Further, when the muscles below the elbow and knee suffer, is not the weakness commonly most pronounced in the extensors of the wrist and the anterior tibial group, while the flexors of the fingers and the calf muscles, though the latter may be enlarged, remain comparatively powerful until a much later date? Dr. Beevor [18] laid it down that—

> "We have to differentiate in any movement between the muscles which take part directly in that movement and the muscles which are used to fix the joints which lie between the joint which is actively engaged and the fixed point or base on which the structure works."

The extensors of the wrist and the muscles of the upper arm play an important part as fixators in forcible grasping, while in running the anterior tibial muscles and the muscles of the thigh play a similar and equally prominent rôle. Now it is these muscles, which are especially concerned with fixation, which are at any rate first affected in the muscular dystrophies. On the other hand, the flexors of the fingers, the small muscles of the hand and the calf muscles, which are the prime movers in relation to the most important functions of grasping and running, tend to escape, as do the small muscles of the hand. Is it not the case, speaking generally, that as we pass from the periphery towards the trunk the muscles play a relatively more prominent part in relation to fixation as compared with conscious purposive movement? I would submit that muscles which are predominantly concerned with fixation are especially predisposed in the muscular dystrophies. This apparent relationship of the incidence of the atrophy to function suggests, does it not, a difference in nerve-supply?

Dual Innervation of Skeletal Muscle.

It has long been known that the skeletal muscles are innervated by the somatic nerves which arise from the multipolar cells in the anterior horn of the spinal cord. Recent observations would, however, appear to indicate that the skeletal muscles also receive a sympathetic nerve-supply. Prof. J. T. Wilson, [19] who has summarised the evidence from the histological standpoint, concludes that—

> "It is difficult, if not impossible, to avoid the conclusion drawn by Boeke and supported by Agduhr and others from the results of what would appear to be crucial experiments, that these accessory fibres are sympathetic in origin and hypolemmal in their mode of termination. These relationships, if admitted, would seem to indicate a centrifugal conduction along these fibre paths of nerve impulses, presumably of motor and possibly of tonic contractile character."

The subsequent investigations of the late Prof. Irvine Hunter [20] upon this subject have, as you know, aroused widespread interest. While it is not my intention to discuss this question I may remind you that it was Kulchitsky's observation [21] "that the medullated and non-medullated fibres never terminate in the same muscle-fibre" which inspired Hunter's investigations. Hunter came to the conclusion from his histological and experimental observations that the differentiation of muscles into "movement" and "fixing muscles," which is so apparent in some invertebrates, is not lost in vertebrates, and that "the skeletal muscle of vertebrates consists of two sets of muscle-fibres disposed in groups each with its own specific innervation and consequently its own specific function." These two muscle systems of invertebrates are, he affirmed, represented as small muscle groups which mingle together to constitute the skeletal muscles of vertebrates. Further, Hunter's investigations led him to suggest that there are two kinds of muscle tone—first, "plastic" tone, which is responsible for the maintenance of any posture once it has been assumed, a function which he believes to be subserved by the sympathetic; and, second, "contractile" tone, which imposes posture on a limb as a result of shortening of appropriate muscles. These investigations and conclusions have been criticised by Walshe [22] who, in a brilliant review of Hunter's work, concludes that a sympathetic motor innervation of striated muscle has not yet been satisfactorily established, and that the experimental investigations undertaken to demonstrate the existence of two forms of tonic muscular activity, plastic and contractile, have not succeeded in doing so. It is, in Walshe's opinion, extremely doubtful if postural tone can be so divided into two separable components, and "consequently the question of a sympathetic innervation of a hypothetical 'plastic' component of postural tone cannot arise until the morphological problem is settled and until the existence of such a component has been demonstrated." Walshe's destructive criticism is of the greatest value, since it serves to indicate the possible fallacies and gaps in the chain of evidence, and indicates the necessity for caution in distinguishing between hypothesis and proved fact. At the same time, after carefully reading his review, I am still left with the impression that there is good reason for believing that the non-medullated fibres which pass to the skeletal muscles are probably sympathetic in origin and that they terminate in the muscle-fibres. In other words, as Langley, whom Walshe quotes, remarks, "the evidence is decidedly in favour of Boeke's views." Further, it is obvious that these fibres must have some function, and if they do terminate in the muscle-fibres, as the evidence would suggest, it seems probable that they are concerned with movement and very possibly with the maintenance of posture. The suggestion that the sympathetic supply to skeletal muscle has to do with

muscle tone, the maintenance of posture and fixation has not been definitely proved; nevertheless, the evidence bearing on the point is, I think, very suggestive.

DEDUCTIONS FROM HISTOLOGICAL APPEARANCE OF MUSCLES.

I shall now very briefly direct your attention to the histological appearances of the muscles in the muscular dystrophies in so far as they appear to have a bearing upon the question at issue. Our knowledge of these appearances, which have been studied and described in detail by many observers, has been derived in part from the examination of portions of muscle excised during life and in part from post-mortem examination. The changes met with vary according to the stage of the disease and are characteristic, if not absolutely distinctive. Again, while they present certain common features, they vary in different muscles and even in different parts of the same muscle. In some muscles, and this would seem to be the earliest stage, the muscle-fibres are swollen and show a rounded contour with poor striation, an increase of nuclei, and little if any increase in the interstitial tissue. On the other hand, in other muscles many fibres of unusually small calibre are met with, together with a great increase of interstitial tissue, thickening of the wall of the blood-vessels, and narrowing of the lumen. The enlarged muscles of pseudohypertrophic paralysis may be found to consist chiefly of large fibres. Later both large and small fibres are found, together with a great interstitial deposit of fat. Eventually the fat is absorbed and the muscles diminish in bulk.

How are these various appearances to be explained? The possibility that the primary change consists in an increase of connective tissue with secondary alterations in the muscle may be dismissed, since in some of the muscles the fibres show pronounced pathological changes with little or no increase in connective tissue. Further, the whole trend of pathological thought of recent years has been to regard proliferation of interstitial tissue as a secondary compensatory process. We see this exemplified, for instance, in relation to certain diseases of the kidney, liver, and heart. Are the muscle changes primary? This is the view which is generally accepted at the present time. On the other hand, the increase of interstitial tissue is often very much greater than one would expect were its increase due to a secondary compensatory process. It is often, for instance, very much more pronounced than that which is met with in the muscular atrophies of spinal origin. This being so, is it not more probable that both the changes in the muscle and in the interstitial tissue are due to a common cause? I would remind you that Duchenne, in writing of pseudohypertrophic paralysis,[23] remarked:—

> "The causative irritation which produces the abundant muscular proliferation and the other alterations in the interstitial connective tissue of the muscles, appears to me to be the probable cause of their enfeeblement. But how is this alteration to be explained and at the same time the change in the connective tissue? This is a problem still awaiting solution."

The suggestion has been advanced that the thickening of the walls and narrowing of the lumen of the blood-vessels which are often to be seen in the connective tissue may be the determining cause. Buzzard and Greenfield,[24] for instance, referring to these changes in the blood-vessels, remark:—

> "It is thus possible that the disease is primarily one of the sympathetic system and that inadequacy of blood-supply to a muscular area may determine the changes in the muscle-fibres. But the bulk of opinion favours the hypothesis that the muscles themselves are primarily affected and that the interstitial and vascular changes are secondary."

The thickening of the blood-vessels is, however, only observed when there is a pronounced increase of interstitial tissue, consequently it would seem to be unlikely that the appearances in the muscles are due to a defective blood-supply. Possibly, however, we have here an explanation of the localised atrophy and "the cricket-ball appearance" which, although only occasionally met with, is so characteristic.

Is it not possible that if both the changes in the muscle-fibres and the increase of interstitial tissue are due to a common cause they may both be a direct consequence of disturbance of sympathetic innervation? Have we not a possible analogy in the tabetic arthropathies? Here we find trophic changes in bone, a tissue of low order. While in some arthropathies there is a great bony increase, in other instances the process is apparently atrophic from the first. We know little if anything of the changes in the muscles which follow sympathectomy. Hunter's observations[25] are suggestive in this connexion, for he has noted the presence of a number of small fibres, an observation which would appear to indicate that the sympathetic has a trophic influence on the muscle, and he also appears to have observed an increase of interstitial tissue greater than that which follows division of the somatic fibres. Thus he writes:—

> "In the case of sympathetic denervation which removes plastic tone, increase in fibrous tissue no doubt renders the muscle more efficient in maintaining a position imposed by active movement or by selective reflex activity. When contractile tone is removed by somatic denervation only a very slight increase of connective tissue occurs over a period of 60 days."

This sentence would certainly seem to suggest that Hunter observed a greater increase of connective tissue after sympathetic than after somatic denervation. Further experimental observations are, however, required with direct reference to this point. Lastly, I would remind you that Erb long ago pointed[26] out that in acute poliomyelitis similar morbid changes (hypertrophy, proliferation of nuclei, division of the fibres), both in the muscles and connective tissue had been noted by W. Muller, Dejerine and Huet, Joffroy and Achard, and Hitzig. But is it not the case that poliomyelitis is a disease in which changes referable to the sympathetic system—coldness and discoloration of the limbs, atrophic changes in the bones and contractures—are often pronounced? In chronic progressive muscular atrophy of spinal origin, in which the pathological changes are limited to the anterior cornual cells, no such changes are observed.

SYMPTOMATOLOGY APART FROM THE MUSCULAR ATROPHY.

Some of the phenomena observed in cases of muscular dystrophy cannot be accounted for on the assumption that these disorders are due to a primary disease confined to the muscles. The marbled appearance of the skin, which is not uncommonly seen in the muscular dystrophies, was such a striking feature in Meryon's cases that this observer was led to suggest a sympathetic origin for the disease. Contractures are often met with both in the early and later stages. They have been especially studied by Hahn[27] and others. Again, while contractures are not observed in the chronic progressive muscular atrophies of spinal origin, they constitute a feature of the clinical picture in many cases of acute poliomyelitis, a disease in which other manifestations pointing to disturbance of the sympathetic system are often present. Further, trophic changes in the bones have been described by Friedreich, Le Gendre,[28] Schlippe,[31] Dreyer,[32] Schultze,[30] Spiller,[29] Timme,[37] and others. Spiller remarks: "In a case reported by me the bones were undoubtedly involved, which seems to indicate that the disease may not be merely muscular." Schlippe, too, believes that the skeletal changes are brought about most probably by the same cause that produces the changes in the muscles. The thigh bone in one of Schultze's cases was only the thickness of one's middle finger, and the humerus was still thinner, the medullary cavity being very small. In the case of a boy of 15 with a muscular dystrophy of the pseudohypertrophic type at present under my care, the bones are almost as thin as in Schultze's case.

though they are of normal length. Eulenberg [35] and Bregmann,[36] on the other hand, have reported cases of muscular dystrophy in which the bones were hypertrophied. Changes in the heart muscle have, I may remind you, been found by Bunting,[33] Potter,[34] Globus and others in pseudohypertrophic paralysis. Again, intellectual impairment, which is generally admitted to be not infrequent, led Duchenne at first to believe that he was dealing with a cerebral disease. Further, as I shall presently point out, pronounced disturbance of the endocrine glands is an occasional accompaniment, while it may be that slighter degrees of endocrine disturbance are not infrequent. These facts all suggest, do they not, that the atrophy of the muscles in the muscular dystrophies is to be regarded as merely the most prominent manifestation of a pathological process which is not confined to the muscles but is much more generalised.

HYPERTROPHY AND PSEUDOHYPERTROPHY.

Enlargement of muscles is a striking feature of some cases of muscular dystrophy. Very exceptionally, as in the case figured by Duchenne, most of the muscles are enlarged. As a rule, however, the enlargement is limited to certain muscles. It may be that the enlargement is sometimes a true compensatory hypertrophy as in two cases I have observed, in which there was great wasting of the quadriceps group, while the tensor fasciæ femoris was very large and powerful. The muscles in this case were not, however, examined histologically. In pseudohypertrophic paralysis enlargement of muscle is typically observed. But it is a mistake to suppose that the enlarged muscles are necessarily weak muscles. The increase in size may, as has been shown, be due, in the earlier stages at any rate, to an increase in size of the muscle-fibres, and there may be no increase of interstitial tissue and fat—i.e., no pseudohypertrophy. I have, for instance, under my care a boy of 11 with great enlargement of the calves and some contracture of the calf muscles, as a consequence of which he walks on his toes. The movement of plantar flexion of the feet in this case is very powerfully carried out against resistance; indeed, I am almost inclined to say that the power evinced suggests a true hypertrophy of the calf muscles; on the other hand, dorsiflexion of the feet is overcome with comparative ease, although there is no actual wasting of the anterior tibial group. The muscles of the upper extremity most often enlarged in pseudohypertrophic paralysis are the spinati, deltoid, triceps, and the extensors of the forearm; while the muscles of the lower limbs, in which enlargement is most often observed, are the gastrocnemii, glutei, quadriceps, and sartorius. Enlargement of the trunk muscles, the serrati, masseters, and tongue is occasionally observed. Very exceptionally are other muscles enlarged. Why is it that some muscles should show a tendency to enlarge, while others, if affected, invariably waste from the first, and why do certain muscles enlarge more often than others? It is, I think I may say, speaking generally, the bulky muscles which usually show enlargement. Is it possible—I put forward this suggestion with considerable diffidence—that these muscles are, on account of their bulk, of especial importance as glycogen storers, and that the enlargement is in some way associated with this function?

Why does pseudohypertrophy occur in some cases of muscular atrophy and not in others? This is not to be explained by the age factor, for although pseudohypertrophy is pre-eminently met with in the cases which occur in childhood, it is not observed in all children suffering from muscular dystrophy, and it is also met with in adults as, for example, in some cases of the juvenile type. Then, again, it is not an essential family trait, for a number of instances have been recorded (Erb, Gowers, Byrom Bramwell, and others) in which some members of a family have suffered from pseudohypertrophic paralysis and others from the same type of muscular dystrophy but without enlargement of the muscles. Obviously, under such circumstances individual predisposition must be the determining factor. A relationship between the muscular dystrophies and the endocrine system has recently been suggested, and I shall presently cite cases which appear to indicate a relationship between disturbance of pituitary function and pseudohypertrophic paralysis. I would suggest that the pseudohypertrophy may possibly be a superadded phenomenon so to speak, and that its occurrence may be determined by a tendency to hypopituitarism, the fat being absorbed at a later date in response to the economic demands of the tissues. Falta [38] refers to a case of hypophyseal dystrophy reported by Marinesco and Goldstein in which fat-permeation of the muscles was apparently found, and he states that this is also observed in primary genital adiposity and in castrated animals.

CAUSE OF THE PARALYSIS.

The sympathetic supply to skeletal muscle is part of an involuntary system, and if the muscular dystrophies are due to disease of the sympathetic, how are the loss of power and atrophy to be explained? If it is the case that the same muscle-fibre is innervated by both somatic and sympathetic nerve-fibrils, may it be that disease of the latter eventually interferes with the voluntary contractile function of the muscle? If, on the other hand, Kulchitsky's view is correct and Hunter is correct in his conclusion that "the two muscular systems of invertebrates are represented as small groups which mingle together to constitute the skeletal muscles of vertebrates," may it be that the voluntary muscle-fibres or the nerve-fibrils which innervate them are secondarily involved? Gordon Holmes suggests [39] that the changes met with in the anterior horn cells in some cases of muscular dystrophy may perhaps be explained by supposing that "the terminal branches of the axis-cylinder, left naked by the disappearance of the muscle-fibres, will be probably injured and possibly destroyed by the connective tissue which proliferates secondary to the muscle disease." May it be that the voluntary nerve-fibrils are secondarily injured and ultimately destroyed by the changes in the muscle or in the interstitial tissue, the increase of the latter resulting not as a secondary process but, as I have suggested, as a direct consequence of disturbance of the sympathetic innervation? But if this is so, why is it the exception to find changes in the anterior horn cells? Here, again, I would refer to Gordon Holmes's suggestion [40] that—

> "The integrity of the nervous system in some cases of primary muscular atrophy is parallel to the fact that sometimes all the ventral motor horn cells disappear after amputation of the segment of the limb which they supply, while in other cases these cells may be practically unaffected."

The enlarged muscles in pseudohypertrophic paralysis for long retain their power. May it be that the fat acts as a cushion or buffer and prevents strangulation of the voluntary fibrils which are only involved at a later date when, as the fat is absorbed, the muscle wastes?

MUSCULAR DYSTROPHIES AND ENDOCRINES.

The question of a relationship between the ductless glands and the myopathies has of late been referred to repeatedly in the literature, notably by the endocrinologists. References to this relationship from the neurological standpoint are, on the other hand, comparatively infrequent. The muscular dystrophies have not received much attention in this relation. Isolated clinical observations have been accumulating, but hitherto very few post-mortem examinations upon cases of muscular dystrophy have been reported in which special attention has been directed to the condition of the endocrines. In two cases studied anatomically by Goodhart and Globus,[42] the only pathological changes in the organs of internal secretion were observed in the thymus, while Clarke and Atwood [41] found in one case an enchondroma of the hypophysis. Pathological observations are necessary in order definitely to establish the suggested relationship on a sure basis.

I shall now direct your attention to certain observations which seem to me to suggest that there is a relationship between disturbance of pituitary function and the muscular dystrophies. I may commence by citing briefly the leading facts of a case in which pseudohypertrophic paralysis was associated with adiposity and defective sexual development.

W. M., aged 11, was admitted to my care on the recommendation of Dr. Andrew Rutherford. The youngest of a family of five, none of his relatives so far as is known have been similarly affected. Always somewhat stout, at the age of 6 he was operated upon for an acute appendicitis. At that time it was first noticed that he was easily knocked over and often fell when walking, and at the same time he began to increase greatly in weight. The muscular weakness has been steadily progressive.

The patient is very stout. His height is 4 ft. 1 in., his weight 7 st. 13 lb. The mammæ are somewhat prominent and there is a definite mons veneris. Although he is said to have been rather backward at school his intelligence appears to be little, if at all, below the average. The genitals are poorly developed, the testes being very small and soft. Headache has not been complained of. The visual acuity, the fields of vision, and the fundi (examined by Dr. H. M. Traquair) show no abnormality. The total quantity of urine for the 24 hours averages 24 oz. The fasting blood-sugar, taken on two separate occasions, was 0·108 per cent. and 0·113 per cent. The sugar tolerance could not be determined. The basal metabolic rate was +11 per cent. on June 1st, 1925; −14 per cent. on Oct. 28th, 1925. Examination of the fæces shows 33 per cent. of fat in the dried stool (split 57 per cent., unsplit 43 per cent.). The systolic blood pressure is 112, the diastolic 90. X ray examination shows no enlargement of the sella turcica or other obvious abnormality. Further, there is a pronounced atrophic paralysis with a typical distribution as met with in pseudohypertrophic paralysis, affecting particularly the muscles of the shoulder-girdle and trunk, the upper arm muscles, and thighs. The muscles below the elbow, notably the extensors of the wrist (the brachioradialis was absent), as also the muscles below the knee, especially the anterior tibial group, show pronounced weakness. There is very definite enlargement of the calf muscles, but on account of the adiposity it is not possible to determine whether there is enlargement of other muscles.

When two uncommon pathological conditions coexist in the same individual the question naturally arises: Is the association accidental or is there some relationship, and, if so, what is it? I have been able to find records of similar cases reported by Foerster, of Breslau,[43] Dziembowski,[44] and McCouch and Ludlum.[41] I have also heard of two further cases as yet unpublished. Foerster refers to the frequency of adiposity and high sugar tolerance in muscular dystrophy. I can personally recall two or three cases of pseudohypertrophic paralysis, seen many years ago, in particularly fat children, and it is, I think, very probable that these would nowadays be regarded as cases of pituitary adiposity. Gardiner-Hill, I. Jones, and Forest-Smith[45] have recently reported 60 cases of adolescent pituitary obesity "in which the primary disturbance seems to be one of pituitary function," a fact which indicates that this condition is far from uncommon. It is, indeed, probable that slighter degrees of pituitary adiposity are often not recognised. Again, it may well be that the muscular weakness may be overlooked in cases in which the glandular symptoms are pronounced. Dr. John Thomson recently mentioned to me a case of pseudohypertrophic paralysis in which the patient became very stout, an observation which would suggest in this case at least a special tendency to put on fat.

But it is further of interest to note that cases have been described by Eulenberg, Marquard,[46] Timme,[47] and Janney, Goodhart and Isaacson[48] in which appearances suggestive of acromegaly occurred in association with muscular dystrophy, a rather striking fact in view of the age of these patients. The following case of muscular dystrophy in which the patient's appearance is suggestive of acromegaly is of interest in this connexion.

J. A., aged 18. A younger brother suffers from pseudohypertrophic paralysis, and a sister has symptoms of rib pressure. A maternal uncle was dumb and is said to have walked in a similar manner to the patient. At the age of 7 the patient developed measles, and from that time his lower limbs and arms became progressively weaker. There is no definite history of enlargement of the muscles. Two years ago people began to remark upon his changed appearance, and he himself noticed about that time that his face was becoming larger.

The patient is somewhat childish. His height is 5 ft. 4 in., his weight 11 st. 13 lb. His features are coarse and large, the lower jaw is long and heavy, the lower teeth project above the upper and are set widely apart; the lips are thick and the mouth very large. The palpebral fissures are narrow, the nose broad and flat, the eyebrows and eyelids thick, the tongue large. There is a large simple goitre. The scalp is very mobile, the hands and feet are thick and broad. The hair is thick and coarse, and there is an excessive growth of hair below the knees. There is a good growth of pubic hair which extends upwards towards the umbilicus. The genitalia are rather infantile. The visual fields show no abnormality. X rays of the skull show no enlargement of the sella turcica or frontal sinuses. The average amount of urine passed during the 24 hours is 37 oz. The heart is somewhat enlarged to the left, but the sounds are pure. The systolic blood pressure is 135, the diastolic 95; sugar tolerance is diminished. The distribution and features of the muscular atrophy are typical of the later stages of pseudohypertrophic paralysis.

All these observations suggest that disturbances of pituitary function are met with in cases of muscular dystrophy with a comparative frequency which cannot be accounted for by coincidence.

A relationship between the pineal gland and muscular dystrophy has been suggested by Timme[47] who, in reporting four cases of "a somewhat atypical muscular dystrophy rather resembling Erb's infantile type," states that "the probability approaches pretty closely to proof that disturbances of the pineal gland play an important rôle in the pathogeny of progressive muscular dystrophy." I cannot here discuss Timme's interesting observations and conclusions. I may say, however, that he attaches considerable importance to "changes in the pineal gland demonstrated by roentgenology." Again, when an endocrine disturbance is met with in association with a muscular dystrophy, may it not be that both are dependent upon a common cause? Cases of muscular dystrophy associated with a pluriglandular disturbance have been reported by Claude[49] and by Brock and Kay.[50]

A hypoglycæmia has been noted by several observers in cases of muscular dystrophy. Thus Janney, Goodhart and Isaacson report nine cases of muscular dystrophy in all of which there was a definite hypoglycæmia. They remark that—

> "The constant presence of hypoglycæmia and the evidence of delayed glucose utilisation in muscular dystrophy make it probable that defects in carbohydrate metabolism are intimately connected with, if not directly causative of, the metabolic picture of the disease. . . . It seems likely that the muscles in this condition undergo weakness, atrophy, and degeneration as the supply of their carbohydrate pabulum is interfered with."

McCrudden and Sargent,[51] who have studied a case of muscular dystrophy with hypoglycæmia in great detail from the laboratory point of view, are of opinion that the hypoglycæmia may underlie the great fatiguability. Again, Goodhart and Globus, who also emphasise the association of hypoglycæmia with muscular dystrophy, hold similar views. But while these observations are of much interest further facts are required, for my own experience leads me to doubt the constancy of hypoglycæmia in muscular dystrophy.

NATURE OF THE PROCESS.

If, as I have suggested, the muscular dystrophies are determined by disease of the sympathetic, what is the nature of the process? If the sympathetic is selected by disease, is it not reasonable to assume that it may be affected by different pathological processes as are the somatic neurons? Is it not possible, for instance, that the sympathetic neurons may not only degenerate but that they may be picked out by selective poisons? Here, however, we

are on the boundaries of a field of which we have little if any knowledge. Cases of recovery from muscular dystrophy have been reported by Erb,[52] Marina,[53] Jendrassik,[54] and others. The diagnosis between pseudohypertrophic paralysis and a toxic neuritis may on occasions, notably in the absence of a family history, give rise to great difficulty. This was so in a case which I have reported elsewhere.[55] In this case the late Dr. F. E. Batten, who was in doubt as to the cause, finally committed himself to a diagnosis of pseudohypertrophic paralysis, and the patient eventually recovered. So far as I know, in all the reported instances in which recovery has occurred, the cases were isolated, no other members of the family having been similarly affected. Is it possible that in these cases of reported recovery from muscular dystrophy the process may have been a toxic neuritis which has selected the sympathetic neurons and thus produced an atrophic paralysis similar in distribution to that met with in the muscular dystrophies? Whereas may it be that the familial cases are determined by a degenerative process, a tendency for the sympathetic neurons to die an early death? I am, however, fully aware that speculation has its limitations.

CONCLUSIONS.

1. The generally accepted view according to which the muscular dystrophies are regarded as myopathies or primary diseases of muscle is a negative conception.

2. There is very considerable evidence which would appear to suggest that the skeletal muscles in man have a dual innervation—a somatic supply concerned with movement, a sympathetic supply with fixation. The suggestion is advanced that the muscular dystrophies may perhaps be determined by disease of the sympathetic supply to skeletal muscles.

3. The muscles especially predisposed to suffer in the muscular dystrophies are: (*a*) those which develop early in the fœtus; (*b*) those which are regressive (in the sense that they no longer fulfil such an important function as in an earlier stage of evolution) as opposed to those which have been acquired at a later date or have taken on new functions; and (*c*) those especially associated with the function of fixation. A difference in function suggests a difference in innervation.

4. The histological appearances met with in the muscular dystrophies are more easily accounted for by postulating a common cause than on the assumption that the process is a primary one affecting either the interstitial tissue on the one hand or the muscle on the other. An analogy is drawn with the tabetic arthropathies in which both hypertrophic and atrophic changes are met with.

5. Symptoms are observed in the muscular dystrophies which cannot be explained by a primary disease confined to the muscles. This would suggest that the atrophic paralysis of the muscles is merely the most prominent manifestation of a more widespread process.

6. It is suggested that the gradual loss of power and wasting may be determined either as a direct consequence of interference with the sympathetic innervation or as a consequence of secondary involvement of the somatic nerve fibrils by the changes in the muscles and interstitial tissue which result from disease of the sympathetic nerve-supply.

7. The suggestion is advanced that cases of muscular dystrophy in which great improvement or recovery has occurred may perhaps be explained by a difference in the nature of the pathological process. While the familial cases may be due to an abiotrophy of the sympathetic neurons, these isolated cases may conceivably have been determined by a toxic neuritis which has selected the sympathetic fibres and produced an atrophic paralysis of similar distribution.

8. Pseudohypertrophy, when it occurs, is an individual rather than a familial characteristic. It is here suggested that it may possibly be a superadded phenomenon dependent upon relative pituitary insufficiency.

9. Facts are submitted which appear to indicate a relationship between disorders of the pituitary gland and the muscular dystrophies. It may be that disturbances of the pineal and other glands also occur. The probability would appear to be that both conditions are due to a common cause rather than that the muscular dystrophy is secondary to the endocrine disturbance.

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DR SCHWEITZER'S HOSPITAL FUND.—Some eleven years ago Dr. Albert Schweitzer, musician and medical missionary, opened a hospital at Lambarene in French Equatorial Africa specially for the treatment of sleeping sickness and leprosy. Early last year he returned to Africa with the object of starting a second hospital in the Cameroons, full facilities being provided by the British Government. Circumstances then prevented the carrying out of the project, but an appeal for help has recently been made by a British council, of which Dr. P. Manson-Bahr is the medical member, in order that Dr. Schweitzer's work may be extended. British Bulletin No. 1 explains the reasons why it should be possible to establish a hospital in British territory at Nyasoso. Up to Sept. 10th last £128 had been received in contributions. Anyone who desires to receive further bulletins should send name and address to Miss M. O. Bronner, hon. treasurer of the fund, at 15, Castleton Mansions, Barnes, London, S.W. 13.

THE SPECIFIC TREATMENT OF PNEUMONIA.

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THERE is little doubt the treatment of pneumonia at the present time is more chaotic than that of almost any other ailment. Some cases are treated with orthodox stock mixtures; others with some drug or combination of drugs in which the prescriber has faith; some believe in poultices, others in icebags. Specific treatment is not uncommonly given without any serious attempt to ascertain whether it is in fact specific—in other words, the precise nature of the infection is inferred, not demonstrated.

Serums and vaccines have revolutionised the treatment of some serious or intractable diseases, but opinions are still sharply divided on the question of their value in pneumonia. There seems, however, to be a fairly general consensus of opinion that specific treatment is more likely to be of decisive value if employed as a first, not as a last, resort. Wynn reports that of 107 cases of influenzal pneumonia 28 were treated with pneumococcal vaccine on the first day, and all recovered; whereas of 20 cases so treated on the fourth day of the disease five died. Lister, from a wide experience in South Africa, is in favour of vaccines in early cases, given in larger doses than we have been accustomed to in this country. He has demonstrated experimentally that the blood serum of rabbits develops specific antibodies after suitable doses of pneumococcal vaccine, and that rabbits so treated resist infection by living and virulent pneumococci, whereas rabbits not so protected invariably die. Lister seems to have definitely proved that prophylactic inoculation of pneumococcal vaccine reduced the incidence of pneumonia.

I have been using pneumococcal vaccine regularly for 15 years as opportunity offered, and, though I have had cases in which this treatment seemed to have no effect, I feel strongly that every incipient case of pneumonia or doubtful "influenza" should be treated with pneumococcal vaccine without delay. If vaccine is given as a routine in doubtful "influenzal" attacks, before definite physical signs are present in the lung, the results will often be so good that we are subsequently in doubt whether we have been dealing with an incipient pneumonia or not. For example:—

CASE 1.—Some years ago I was asked to see a patient in consultation a little before midnight. The doctor in attendance had, with another medical man, come to the conclusion in the afternoon that the patient was suffering from incipient pneumonia. When I saw him his temperature was about 104° F.; he had a well-marked malar blush. His illness began some 12 to 18 hours before my visit. All the evidence available was in favour of the diagnosis already made. I gave him a medium dose of pneumococcal vaccine; and it was arranged that the three of us should meet in consultation the following afternoon. We did so, and were astonished to find that a complete transformation had occurred in the interval. His temperature was normal; his pulse had also fallen; but, fearing that he might not make an uninterrupted recovery, I took a blood culture, with a view to preparing an autogenous vaccine if necessary. The culture was negative.

A wider experience has shown that a negative result might have been anticipated. It is now clear that I should have taken a blood culture when his temperature was high the night before. If this had revealed a pneumococcal infection there would have been no doubt as to the nature of the illness, and little doubt as to the value of the treatment adopted. Of course, it may be argued that a negative blood culture does not exclude a pneumococcal infection. I quite agree; but it seems to me that for the purpose of establishing this treatment on a firm basis only positive cases should be considered.

Diagnosis by Hæmoculture.

Diagnosis by hæmoculture is more frequent than it was a few years ago; but I doubt whether its advantages and limitations are even now generally appreciated. A septicæmia is probably always present during the first few hours of a pneumonia. When this septicæmia persists to the later stages, and is associated with a comparatively low leucocyte count, I have found that the prognosis is bad, though the patient's general condition may seem fairly hopeful. Hæmoculture in pneumonia has recently become more important for treatment also. When positive it is the most convenient and rapid method for ascertaining the type of pneumococcus present, as a preliminary to the use of the Rockefeller serum in Type 1 cases. But this septicæmia is, as a rule, transient; it usually disappears in a day or two in cases of moderate severity. Fortunately, it is present most frequently at the stage when we are most in need of help in diagnosis and guidance in treatment. Besides, a positive blood culture permits of the earliest possible preparation of an autogenous vaccine.

As evidence of the comparatively transient character of the septicæmia in pneumonia, I may recall a case I published ten years ago. It came under observation during the incubation period, the only case of the kind I have seen. It is also relevant in this connexion as it was treated with pneumococcal vaccine on the first day of the fever.

CASE 2.—A man, aged 46, consulted me in the evening on his way home from work. His pulse was 92; temperature normal (? or subnormal); he had no pain or other sign of a serious illness, but I was well acquainted with him, and, though I could find nothing wrong, I believed him when he said he *felt* ill, as he was paler than usual, with a distinctly "pinched" expression. Next morning I found his temperature 102° F.; pulse 108; respirations 40. Pneumococcal vaccine was given at once, and at the same time a blood culture (10 c.cm.) was taken; this yielded a profuse growth of pneumococci. Next day there was some improvement, but on the third day of the fever his temperature again touched 102° and his respirations 48–50. There was now some cyanosis, and for this reason some blood was taken from a vein and 10 c.cm. of it used for a second culture. This culture was sterile, though the patient was obviously in a serious condition. A larger dose of vaccine was now given, and next day (the fourth day of the fever) the following observations were made: Morning: temperature, 102°; pulse, 120; respirations, 58. Evening: temperature, 98°; pulse, 76; respirations, 54. The respirations continued high for several days, and there was still some delirium and restlessness. His pulse, however, never rose again above normal, and the temperature only touched 100° one evening. He has remained in good health up to the present time (1925).

I suggest that in this case there is a reasonable presumption that the natural course of events was modified by the vaccine. If this view be accepted it follows, I think, that this method of treatment should be tried on a larger scale than hitherto in incipient cases; but I venture to urge that hæmocultures are indispensable until conclusive evidence of the value of the treatment is forthcoming on a large scale. A mere multiplication of results similar to that recorded in Case 1 can hardly be expected to settle the question. I have had a number of results similar to that in Case 2 in the last 15 years, and many others are recorded in papers by Harris, Morgan, Raw, and Wynn. My experience points mainly to the necessity for prompt treatment of incipient cases. I can cordially endorse Dr. Wynn's dictum that early pneumonia "should be regarded as an acute medical emergency demanding prompt action in the same way that a perforated duodenal ulcer and acute appendicitis are regarded as acute surgical emergencies."

The treatment of incipient pneumonia is the concern mainly of the private practitioner, for it is he who is faced with these emergencies. The consulting physician sees them at a later stage, often, indeed, so late that specific treatment, if employed at all, is not given a reasonable chance. But material for a final assessment of the value of specific treatment in early pneumonia can hardly be anticipated from the

isolated efforts of individual private practitioners under present conditions. If pneumonia were dealt with on similar lines to diphtheria as regards diagnosis, specific treatment, and notification the outlook would be more promising. In connexion with pneumonia, however, I suggest that it would be desirable not only to provide pathological facilities and vaccine or serum, but also some sort of clearing-house, preferably as a department of the public health service, which would collate clinical records. This would eventually permit of a sufficiently wide scrutiny of results to settle the matter to the satisfaction of all except perhaps the occasional crank who refuses to be influenced by evidence.

Conclusions.

I may summarise my conclusions as follows: (1) A medium dose of stock pneumococcal vaccine is free from risk; it appears to be of decisive value in many incipient cases; it should be used with the least possible delay. (An autogenous vaccine or Rockefeller serum involves some delay; they can be used later, if required.) (2) Any estimate, favourable or unfavourable, of specific treatment is comparatively worthless where the diagnosis is based solely on clinical evidence. (3) Hæmocultures are more frequently positive in incipient pneumonias than in the later stages; when positive at the onset they are helpful in treatment as well as diagnosis; when positive in the later stages they provide one of the most reliable foundations for accurate prognosis.

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LIPIODOL IN THE DIAGNOSIS OF PREGNANCY.*

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SINCE the discovery of X rays efforts have been made in different maternity hospitals to obtain radiographs of the fœtus during pregnancy, in order to make diagnosis clear and to throw light on conditions not recognisable by ordinary clinical methods. This problem has been partly solved by the newer apparatus, for it provides us with rays of such quality as to allow the taking of radiographs of the fœtus after the third month of pregnancy. These rays comprise a certain percentage of hard and white rays, from which must be eliminated the secondary rays and the reflections produced by the Potter Bucky diaphragm, in order to obtain a picture of the bony structure of the fœtus. There is no other way to make clear or to confirm a diagnosis in the early stages; X rays are absolutely indispensable for the diagnosis of a twin pregnancy, an anencephalous fœtus, or a dermoid cyst in case of non-appearance of the period for the first month or two. The exact appreciation of a pelvis narrowed in its different diameters can only be had after a good radiograph, and all the cases diagnosed by us have been successfully operated upon, for, before starting operation, we knew exactly what we had to deal with.

Apparatus and Method.

The best method of taking a good radiograph is to use a modern equipment—an apparatus which produces 100 kilo volts, 80 milliampères, tube Müller, Metro, or Medor, double reinforcing screen, films Victor, &c. These are the elements that must be relied upon in order to give a full measure of security. The photographer's art is indispensable in these cases in order to obtain the highest possible definition and clearness. It is also of great importance to have the bowels evacuated and that the fœtus and patient should be motionless. A purgative and an enema must be given the day before the radiograph is taken, and on the day of examination another enema is given with 40 drops of laudanum (Sydenham) in 50 c.cm. of water, and 10 to 20 drops are given to the patient one hour before the radiograph is taken. In this way a successful radiograph may be obtained from the fourth month of gestation.

Radiography Before the Fourth Month.

What I am about to explain is something different, something essentially new—viz., the taking of radiographs before that stage, a method entirely my own. It was perhaps by a scientific inspiration that, after the injection of lipiodol into the trachea, as used by Prof. Sergent, I conceived the idea of adopting the method with the uterine cavity, and so making possible a diagnosis of pregnancy. When a period or two is missed you can never be quite sure that a patient is pregnant, for the uterus might be small or it might be ante- or retro-flexed. In such cases a precise diagnosis is only possible by the use of X rays to show whether the cavity be occupied or not. In the different pregnant patients in whom we have injected lipiodol into the uterine cavity we did not provoke an abortion, while, on the other hand, the radiograph has enabled us to arrive at a positive diagnosis.

Usefulness of the Method.

In these conditions we have laid down fixed rules. When a woman after conception, and after one or more missed periods, wants to know if she is pregnant, and the clinical examination is indecisive, lipiodol must be injected into the uterus. A radiograph should then be taken in order to give absolute certainty. Under no other conditions must we proceed, in order to avoid dangerous eventualities.

If the injection has been successfully made the radiograph of the uterine cavity filled up with lipiodol shows: 1. That the cavity is not well filled if the fœtus is more or less developed, the lipiodol penetrating round the fœtus, and showing that the cavity is occupied. 2. The round shape of the stain with the radiograph of a tube together with the clinical symptoms indicating the pregnancy. 3. When the fœtus is larger, the liquid penetrates very little, in a line more or less curved, and the form of the radiograph of the uterus indicates the pregnancy. 4. If the period is missed once or twice and the patient thinks herself pregnant, the injection of lipiodol into the uterine cavity may show in triangular shape and at the same time one or both tubes may fill up with the liquid. In such a case the radiograph shows that the uterine cavity is unoccupied and there is no pregnancy. 5. Every radiograph of the uterine cavity must be complete in order to show the neck and cavity for a satisfactory diagnosis to be made from it, together with the clinical symptoms. 6. The radiograph may thus allow us to diagnose sterility due to obstruction of the tubes; for it may be observed that they do not fill or fill up badly. 7. In cases of pyosalpingitis and old salpingitis a radiograph of the tubes can be obtained and the diagnosis confirmed.

The procedure to be described is entirely new and is submitted now to others for the test of further experience. Hitherto we have had no means of trustworthy diagnosis of pregnancy in the first months. The problem is a serious one, for in all maternity homes there are records of cases of early pregnancy which have been operated on for fibroma. The injection of lipiodol into the uterus does not provoke abortion if definite rules are observed.

Technique of the Method.

We have applied this method in the case of all our patients who have presented themselves without any special selection and without any disturbance further than a careful disinfection of the

* Presented at the London Congress of Radiology.

vagina and the bladder. For that purpose we give, before taking the radiograph, a mild laxative in order to clean out the bowels; at the same time we douche the vagina with rivanol and instil twice a day silver nitrate solution or choleval into the bladder if there be cystitis. Four hours before we give 20 to 30 drops of opium, in order to keep the patient quiet. On the day of the injection we clean the vagina with liquid formalin soap, we brush the neck of the uterus with tincture of iodine, and with the most careful antiseptic precautions we introduce a large metallic cannula into the uterine cavity until the Brandt ring can pass. Then we inject 1 to 2 c.cm. of lipiodol, we take the radiograph, and inject, if possible, another 2 to 5 c.cm. and take a second radiograph. At the same time, if a better radiographic picture is wanted we inject 40 to 60 c.cm. of air into the bladder. The patient must be lying on her shoulders and in the Trendelenburg position.

In the cases in which diagnosis is doubtful between a tumour and pregnancy we inject the first day 2 to 5 c.cm. of lipiodol, and the following day we inject air into the tubes in order to cause a pneumoperitoneum of 150 to 200 c.cm., the patient being in the Trendelenburg position. Afterwards we inject 5 to 10 c.cm. of lipiodol in order to show the uterine cavity. We use the liquid warm, without employing much force, with a light pressure, and without moving the cannula within the uterus.

During the injection the eyes of the patient must be observed, for the pupil is dilated when the liquid enters the tubes. The pupillary reaction is characteristic. When the injection enters the tubes it produces a little colic, and first there is a dilatation and afterwards a contraction of the pupils. If the woman has had salpingitis, this reaction is much stronger, but the passing of the liquid through the tube does not cause any pain. The lipiodol runs all over the uterine walls and penetrates into the tubes if these are free, but if they are obstructed on account of a former salpingitis they do not fill up. In these cases it is necessary to persist with the injection once or twice more in order to get them filled.

In cases where we wish to know if the tubes are permeable, whether for the diagnosis of sterility or of salpingitis, the technique is different. In these cases we previously empty the bowels, make the patient urinate, and give her 30 drops of opium in some water one hour before. Then we introduce 10 to 20 c.cm. into the uterus with a big cannula, the neck of the uterus being well closed in order to avoid the passing of the lipiodol into the vagina. The lipiodol fills up the uterus and passes into the tubes. If the lipiodol drops out into the vagina we repeat three or more times, until we are sure that it has passed. Before taking the radiograph we fill the bladder with air. In the cases of salpingitis the tubes do not fill up with the first injection; and it is necessary to repeat the injection until we obtain a good radiograph.

By this procedure it is possible to find out the causes of sterility in women, whether that be obstruction of the tubes or malposition. In cases where the tube is twisted the radiograph will give us a clear view of all details. If we are confronted with a tumour of doubtful nature we induce pneumoperitoneum by the ventral way or by way of the tubes, and then the injection of lipiodol is made into the tubes and the radiograph taken, the patient being in the Trendelenburg position. By this means the clear space in the pelvis due to the pneumoperitoneum reveals the tumour of the uterus and the relations of both with other organs.

Finally, I wish to mention that in Buenos Aires Dr. Uslenghi, Dr. Martinez, and the author have tried to provoke abortion in tuberculous patients by this means when it was indicated, but we did not succeed.

Corrigendum.—In the legend to Dr. C. C. Chesterman's illustration of the effects of tryparsamide in sleeping sickness (THE LANCET, Nov. 7th, p. 966) the word "tryparsamide" where it twice follows "ago" should read "trypanosomes."

A CASE OF
POLYCYTHÆMIA RUBRA RELIEVED BY X RAY TREATMENT.

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THE case about to be described has been under close observation for 12 months, and is of interest because of the great improvement effected by X ray treatment applied to the long bones of the limbs, with the object of arresting overproduction of blood. It is suggested that the method may also be useful in treating certain cases of high blood pressure.

Clinical Record.

The patient was an unmarried woman, aged 42, whose mother died of Bright's disease at 38, and the father at 48 of "meningitis." During life his appearance and symptoms were similar to those of his daughter. The patient had had no severe illnesses until 1919, when she first noticed a blotchy non-pruritic rash on the left forearm. In April, 1919, she had two attacks of what was thought to be a severe nettle-rash of the face. The blotches on the left forearm came at intervals, but in other respects she was well till May, 1921, when she felt giddy and sick, and fell in the street. About a month later she woke one morning and felt a sharp pain down the left side of the head and left arm; the arm was numb and the hand has been weaker since. The power is gradually coming back, but the fingers are still weak. At that time the left knee-jerk was found to be exaggerated, and there was some staggering on walking. Headache and giddiness increased gradually. In the autumn of 1923 she noticed swelling and numbness of the left hand; and when examined in Paris in November, 1923, the blood was found to contain 7½ million red cells per c.mm. and blood pressure was 175 mm. Hg. The patient was put on a lacto-vegetarian diet with rests, and remained without much improvement till admission to Ruthin Castle in June, 1924.

On examination the face was high-coloured, fingers tended to be clubbed, and there was a blotchy, dark pink rash on the left forearm. The pulse was regular, of good volume, the artery wall not palpable during diastole, blood pressure 204/120 mm. Hg. The cardiac impulse was in the left nipple line, and the aortic second sound was accentuated. The electrocardiograph showed a normal P.-R. interval and an inverted T in lead III. The blood had 130 per cent. hæmoglobin measured by Sahli's apparatus, and contained 7 million red cells and 8000 white cells per c.mm. The differential count showed a normal distribution of these white cells. The viscosity of the blood was greatly increased; its withdrawal through a needle of ordinary bore was difficult and the blood clotted rapidly. There was no loss of power or altered sensation in the distribution of any of the cranial nerves, but distinct weakness and slight diminution in the circumference of the left arm and forearm. The muscles of the leg appeared normal. The knee-jerks were active and normal, and the left arm-jerks were increased in comparison with the right. Both plantar reflexes were flexor. Sensation to touch and pin-prick in left arm normal, but there was inability to name objects by touch (astereognosis).

The edges of the liver and spleen were firm and palpable. The urine contained 0·5 per cent. of albumin, and there were a few casts and epithelial cells in the deposit. The urea-concentration test was at the third hour 2·4 per cent., a low normal value. The basal metabolism rate was 100 per cent. of the normal. Sugar-tolerance curves for glucose and lævulose gave normal figures. The fractional test-meal showed super-acidity. X ray examination of the alimentary tract showed an abscess of the right upper premolar tooth, enlargement of the liver and spleen, and considerable delay in the colon. The diagnosis was made of essential polycythæmia rubra, with thrombosis of a vessel supplying the cortical centre for the left arm and hand.

Treatment.—The patient was treated as follows: The lacto-vegetarian (anticonstipation) diet, which had been taken for some time, was continued and the affected tooth removed. One grain of thyroid was administered twice a day and an intestinal douche twice a week. X ray treatment to the long bones was given twice weekly, on 25 days for 8 minutes each treatment, from July 4th to Oct. 17th, with the object of arresting the overproduction of blood. Diathermy was applied from hands to feet on the other 4 days a week, 12 minutes for each treatment, passing 800 ma. Fig. 1 shows curves of the blood count and blood pressure before, during, and after the treatment.

Clinically, the colour became normal, headache and giddiness disappeared, and the spleen was no longer palpable. A subjective feeling of well-being accompanied the return of

the red blood cell count to normal. The urine still contained on April 21st, 1925, a faint trace of albumin. No casts were found. The electrocardiograph showed as before an inverted T wave in lead III.

It is now nine months since the treatment was discontinued. During this time the patient has remained well and repeated examinations have shown a normal blood count.

Results.—A steady improvement in the blood count, the blood pressure, and the clinical state took place when these measures were used. It will be seen that the red cells and hæmoglobin diminished to normal values, which have been maintained. At the same time the blood pressure fell to a normal figure.

Discussion.

The simultaneous fall in blood pressure to a normal level is striking. This fall may have been the result of diathermy treatment, but, from a comparison with a large number of other cases, I think this is unlikely. The blood was at first much more viscous than normal and was aspirated with difficulty through a needle. The increased viscosity itself is an explanation of the high blood pressure owing to the increased work which the heart must do in order to drive the viscous blood through the arterioles. Parkes Weber [1] has pointed out that many cases of polycythæmia show no rise of blood pressure, and attributes this to a compensatory dilatation of capillaries. Other possibilities are that adrenalin-like substances having a pressor action might bring about a raised blood pressure, and at the same time an inspissation of the blood, owing to greater perfusion of the watery constituents; but such a toxin would probably not have so continuous an effect. It may be that there is also excessive production of red blood corpuscles by a bone-marrow over-stimulated by some poison.

FIG. 1.

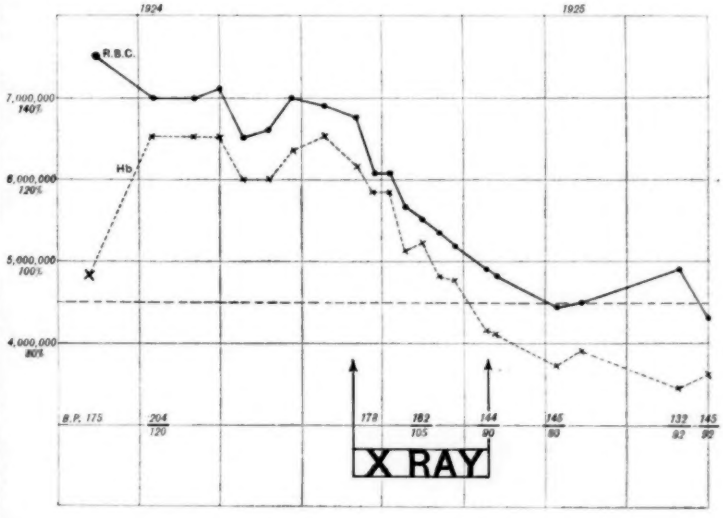
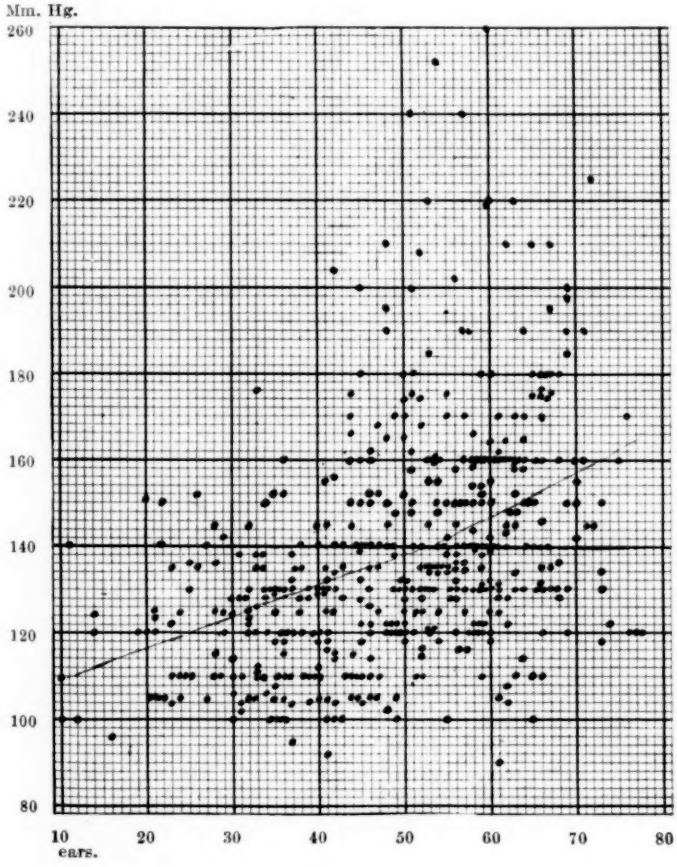


FIG. 2.



Suggested Use of X Rays in Cases of High Blood Pressure.

The successful result in the above case suggests that the application of X rays to the long bones may be of value in the treatment of high blood pressure. The red cell count in patients with high blood pressure may be above or below normal. Those showing counts above normal are often the subjects of early heart failure and show signs of cyanosis, but a certain number of patients with blood pressure above normal have been found to have a supernormal red cell and hæmoglobin count, apart from any failure of the heart. Patients with low red count are often the subjects of secondary renal disease. From the records of Ruthin Castle, of the last 41 patients with a systolic blood pressure of 180 mm. Hg or more, 19 had a red cell count and hæmoglobin above normal—i.e., nearly 50 per cent. The chart (Fig. 2) shows the systolic blood pressures of 489 cases at Ruthin Castle in relation to their age. There is, of course, a rise in the average systolic blood pressure with increasing years. Of those having a blood pressure above normal, 41 out of 84 had also a high red cell and hæmoglobin value, 29 being distinctly supernormal.

Patients suffering from hypertension have been greatly benefited by venesection and the removal of one-half to one pint of blood, but the good effect of this is only temporary, and it is suggested that a more lasting effect may be obtained by diminishing the red blood cells by applying X ray to the marrow in the long bones, in this way reducing the red blood corpuscles slowly and under control.

During the treatment of patients in the Frankfürter Frauenklinik by deep X ray

therapy, Wolmershäuser [2] noted that 75 per cent. showed a fall in blood pressure which might amount to 50 mm. of mercury, and this fall occurred whether the patient suffered previously from hypertension or not. This was attributed to a dilatation of the skin vessels and possibly to increased vagus action on the heart.

The first patient on whom this method was tried was a married women, aged 52, who had been admitted on a previous occasion for high blood pressure, headaches, and attacks of giddiness. Under treatment for four months by diet, rests, graduated exercises, diathermy, baths, and venesection (three times), the blood pressure, which had been 240, was reduced to about 170–180. Soon after her return home the headaches and giddiness recurred, making her an invalid and calling again for venesection. She was readmitted to Ruthin Castle and the same treatment carried out with the addition of X ray exposures of the long bones twice a week. The blood pressure fell from 214 to 150–160 mm. Hg in two months, and the patient has been able to lead a comfortable though restricted life for the last four months. Recent reports give the blood pressure as still 150–160, although the hæmoglobin and red corpuscles have increased again.

Summary.

A case of essential polycythæmia rubra was treated successfully by exposing the long bones to X rays with the object of arresting overproduction of blood. It is suggested that the method may also be useful in treating certain cases of high blood pressure.

References.—1. Parkes Weber: Polycythæmia, Erythrocytosis, and Erythræmia, London, 1921, p. 14; Brit. Med. Jour., 1925, i., 1108. 2. Wolmershäuser: Ref. in Klin. Wochenschr., 1924, p. 995.

TWO CASES OF ACUTE GLOMERULITIS.

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THE picture of acute nephritis usually presented to students and practitioners alike in this country is that of a disease associated with œdema, hæmaturia, and albuminuria. It is, in fact, the clinical picture presented by either the "nephrotic" or "Misch" forms of nephritis of Volhard and Fahr,[1] the most recent systematic writers on the subject. This type of acute nephritis is by far the most commonly met with in practice; none the less, it is well to bear in mind that it is quite possible to have a very acute and fatal nephritis presenting no œdema at all in the clinical picture. Such a type of nephritis is the acute glomerulitis described by the German authors. It is probably not a common condition, though its rarity may be more apparent than real, since the possibility of its occurrence is seldom taken into account in the making of a diagnosis. These considerations serve as the reason for the publication of the cases described below.

Clinical Records.

CASE 1.—Female, unmarried, aged 22. In good health up to three days before admission. Sudden onset with abdominal pain followed on the second day by vomiting and severe headache. No urine was passed during the 48 hours preceding admission to hospital.

Condition on Admission.—The patient was drowsy and almost comatose; temperature normal; pulse 76. Blood was oozing from the gums and the head was retracted. The abdomen was rigid and both pain and tenderness were present in the epigastrium. Catheterisation resulted in the drawing off of a few ounces of blood-stained and highly albuminous urine. Death occurred on the day following admission, the patient up to that time having been running a temperature up to 102° F.

Post-mortem Examination.—The body showed no œdema, nor was any excess of fluid present in the serous sacs. The only organs showing any abnormalities were the kidneys; these appeared large, tense, and deeply congested; on section the capsule stripped readily, the cortex was increased in depth and dark in colour. Microscopically the kidneys showed no fibrosis and little round-celled infiltration, and no apparent abnormality of the tubular epithelium. Many of the tubules, more especially the convoluted, were stuffed with blood, coming apparently from the glomeruli, upon which the whole brunt of the pathogenic agent appeared to have fallen. The glomeruli were universally affected and all in the same way and to the same degree. The tufts were so swollen that they completely filled the capsular space; the normal differentiation of the tufts had disappeared and the nuclei appeared to be increased in numbers. Many of the tufts showed hæmorrhage. The endothelium lining Bowman's membrane in every instance showed some degree of proliferation, which in many cases had proceeded to the formation of pronounced "endothelial crescents." All the glomeruli showed collections of round cells about their periphery; in some instances these collections were fairly extensive, and where this was the case it was often apparent that the continuity of Bowman's membrane had been dissolved, and the inflammatory round cells had actually passed into the intracapsular space and were invading the tuft itself. Although all the glomeruli without exception showed signs of morbid change the tufts showed no inflammatory cells, except in those instances in which solution of Bowman's membrane had occurred. The appearances suggested that the vitality of the tufts had been universally damaged by some pathogenic agent, and that the invasion by round cells was occurring as the result of this devitalisation. The objective of the round cells appeared to be the tuft itself, but it would seem that they were unable to reach it until actual solution of the capsular membrane had been brought about.

CASE 2.—Female, aged 12. Had been in bed for two weeks prior to admission with diarrhœa and vomiting, becoming increasingly acute. At the onset there had been swelling of the face in parotid region on both sides, but this had subsided.

Condition on Admission (May 23rd, 1925).—Temperature normal, pulse 84; mouth and tongue very foul; patient almost comatose. There was general tenderness and rigidity over the abdomen; the urine contained much albumin.

Course in Hospital.—May 24th: Vomiting continuing. Condition otherwise unchanged. Only 5 oz. of urine passed. 25th: Bleeding commenced from mouth and gums and continued until death. A dark red morbilliform rash appeared, patchy in distribution, affecting face, trunk, and limbs alike. No urine passed. 26th: No urine passed; 2 oz. collected by catheter. 27th: Temperature still normal; pulse 96. The vomiting became violent, and blood was brought up in considerable quantities up to the time of death on the following day. No urine passed.

The results of the laboratory investigations on this case were as follows.

Urine.—May 24th: Much blood present, no casts or organisms seen. Albumin + + +; reaction acid; urea 1·64 per cent. 26th (catheter specimen): Much blood present, film shows numerous streptococci but no pus cells. Culture *B. coli* and streptococcus. 27th: Same as for previous day except that streptococci were obtained in pure culture.

Blood.—May 26th: Urea, 648 mg. per cent.; red cells, 5,580,000 per c.mm.; white cells, 36,700 per c.mm.; polymorphs, 95 per cent.; lymphocytes, 5 per cent.

Cerebro-spinal Fluid.—May 26th: No pleocytosis. Globulin slightly in excess (? due to contamination by blood). Sugar, 137 mg. per cent.

Post-mortem Findings.—Body was that of an emaciated and poorly developed female child showing the remains of a dusky rash on face, trunk, and limbs. Heart: Nothing abnormal. Lungs: Right lung showed some small localised patches of consolidation; left lung nothing abnormal. The liver, spleen, intestines, and brain showed no abnormalities. The stomach showed some areas of hæmorrhage into the mucosa, but no bleeding points from which the vomited blood might have come. Kidneys: Right 185 g., left 176 g.; both large, dark red, and tense. On section the capsule stripped readily leaving a perfectly smooth surface. The cut surface showed marked bulging; the cortex was greatly increased in thickness and somewhat pale in colour. The histological appearances of the kidneys were almost identical with those described under Case 1. The only difference was in the comparative lack of proliferation of the endothelium lining Bowman's membrane with a consequent rarity of endothelial crescents. These were present, but not nearly so plentifully as in Case 1. The tufts showed the same changes as in Case 1, but on the whole to a rather

[1] Volhard, F., and Fahr, Th.: Die Brightsche Nieren-Krankheit, Berlin, 1914.

greater extent. Proliferation of the intracapillary endothelium was marked and degeneration had proceeded to breaking up and pyknosis of the nuclei.

Comments.

Case 2 corresponds fairly closely to the intracapillary type of glomerulitis of Volhard and Fahr, while Case 1 is a good example of the extracapillary type. These two cases, however, serve as illustrations of the fact that these two types are not really distinct entities, as each showed changes both of the extra- and intra-capillary types, though the relative distribution of the two types of lesion differed in the two cases. Owing to its rapid termination in death Case 1 was incompletely investigated. Considering, however, the close resemblance of the histological appearances of the kidney in this case to those shown in Case 2, it seems justifiable to assume that the results of the clinical laboratory investigations would have been the same. The blood-urea in Case 2 was very high, and presumably urea retention was also a feature in Case 1. This, of course, was to be expected in view of the almost complete suppression of urine. The blood picture in Case 2 is interesting; the high white count would seem to indicate an acute infection; the temperature, however, remained normal throughout. In Case 1 the rise of temperature to 102° F. just before death also points to the presence of an infective agent. The generalised morbilliform rash in Case 2 serves also to point to the activity of an infective agent. This rash occurs occasionally in cases of mixed glomerulo-tubular nephritis; curiously enough, such a case with rash happened to be admitted to the same ward a few weeks after the death of Case 2.

The presence of streptococci in the urine in very large numbers in Case 2 suggested that this organism might be the cause of the condition. The complete absence of pus cells from the urine, however, was strongly against this assumption. It seemed much more likely that the streptococcus was a saprophyte growing in the scanty stagnant urine; the presence of *B. coli* along with it lent support to this view, as also did the fact that the streptococcus was non-hæmolytic and gave the reactions of *S. fæcalis* (Holman). Careful search through sections stained with eosin and methylene-blue failed to reveal any organisms in either case, and on this evidence the streptococcus was definitely ruled out as an ætiological agent.

The combined evidence presented by these two cases none the less points strongly to the infective origin of acute glomerulitis. The absence of any pus cells in the cellular reaction occurring around the affected glomeruli would appear to rule out the pyogenic cocci as the causative agents, while at the same time the histological picture corresponds to that produced by none of the recognised pathogenic organisms. Granted the existence of an infective agent it would seem that it must be one of those not detectable by ordinary microscopic methods. The relationship of this extremely acute and rapidly fatal type of glomerular nephritis to the more common glomerulo-tubular type is open to question. It is possible that with a less overwhelming infection the course of the condition might have been slower, allowing for the appearance of the characteristic tubular changes. On the other hand, acute glomerulitis of the type described may be an entity in itself, bearing no relationship to the mixed form.

Summary.

Two cases of pure acute glomerulitis are described, both with fatal issue. Both cases were characterised by almost complete suppression of urine and complete absence of œdema. Evidence is adduced pointing to the infective nature of this type of case, though in neither of the two instances described could the causative organism be identified.

My thanks are due to Dr. T. H. Galbraith and Dr. E. H. Coleman, in whose beds the cases described were patients while in hospital.

Clinical and Laboratory Notes.

A CASE OF UNDULANT FEVER CONTRACTED IN ENGLAND,

AND COMPLICATED BY HÆMORRHAGIC EFFUSION INTO THE PERITONEAL CAVITY.

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As a condition arising in this country undulant fever is sufficiently rare to command attention. There appear to be few such instances in the literature, but one was reported by Byam[1] in 1918. The following case presented unusual features.

The patient was a male, aged 28, by occupation a draughtsman. His family history revealed nothing of import. During the war he served in France, and was inoculated with T.A.B. vaccine in 1916. While in France in 1917 he suffered from trench fever and influenza, but there was nothing to suggest that during this period he suffered from undulant fever. Early in October, 1923, patient was staying in the country, and whilst there on one or two occasions drank raw goat's milk. A few days later he returned to London, and about the middle of October, ten days or so after partaking of the milk, his illness began. This incubation period of ten days corresponds to that usually described. The first symptoms noticed were severe night sweats, rise in temperature, and a general feeling of unfitness. A week later both hip-joints became stiff and painful, and a little later still the left wrist was painful and swollen. At the end of a fortnight, however, both hips and wrist had returned to normal, but pains in the shoulders followed and these in turn passed off. The night sweats became worse, and his temperature taken on two successive nights was 104° F. This condition continued, and he was admitted to St. Thomas's Hospital on Jan. 1st, 1924, at the request of his medical attendant, Dr. R. C. P. Whitcombe, who suspected undulant fever.

Condition on Admission.—The patient was anæmic, and had obviously lost a considerable amount of weight. The pulse was 96, regular, full and easily compressible. The heart sounds were normal, and there was no evidence of cardiac enlargement. No abnormal physical signs were found in the chest. The spleen was just palpable. The urine had a sp. gr. of 1020, acid, and contained neither albumin nor sugar. The illness proved to be long and tedious.

After admission the fever continued, with headaches and night sweats varying in intensity from time to time. On Feb. 6th it was noticed that the abdomen was becoming distended. There was tenderness over the spleen and dullness on percussion in both flanks. About the 10th the fever began to subside, but the abdominal distension slowly increased, and on the 15th 50 c.cm. of a dark hæmorrhagic fluid was withdrawn for examination. The distension, however, became more and more marked, and on the 26th 8½ pints of similar fluid were withdrawn. Following paracentesis the patient showed a marked improvement in the general condition, the severity of the symptoms diminished, and though a certain amount of fluid was left in the peritoneal cavity this was slowly and gradually absorbed, until, on examination on March 24th, the abdomen appeared normal. He also began to gain in weight. At the beginning of April, however, a relapse occurred, the temperature rising, and frontal headaches and night sweats returning with their former intensity. There was no recurrence of the arthritis or ascites.

On May 3rd, 1924, the patient was discharged from hospital at his own request, and since discharge he appears to have made rapid improvement, as in a letter received months later, in April, 1925, he states that his temperature has been normal since July, 1924, and that he is in good health and able to do his work without difficulty.

Bacteriological Examination.

A blood examination was undertaken on Jan. 2nd, 1924, the day after admission. The total leucocyte count was

[1] Byam, W.: A Case of Malta Fever arising in England, THE LANCET, 1918, i., 873.

3480 per c.mm., of which 56 per cent. were polymorphs, 24 per cent. large lymphocytes, 10 per cent. small lymphocytes, 9 per cent. large hyalines, and 1 per cent. mast cells. The blood serum gave an agglutination with typhoid antigen at a titre of 1/100, with para. A at 1/50, but with para. B and C there was no reaction. These results were presumably attributable to the T.A.B. inoculation in 1916. The serum was found to agglutinate both *M. melitensis* and *B. abortus* antigens at a titre of 1/2000, which end-point is as high as that of the artificial serum prepared at the laboratory. A blood culture done on the same date proved subsequently, however, to be sterile, and two further blood cultures made at later dates were unsuccessful. Cultures were also made from the urine of the patient obtained on Jan. 4th, but *M. melitensis* was not cultivated, and two guinea-pigs inoculated with the urine intraperitoneally showed no ill-effects, and six weeks later were quite normal. The hæmorrhagic fluid from the abdomen was also examined. It contained a large amount of blood. Of the leucocytes 60 per cent. were lymphocytes and 32 per cent. polymorphs, and many showed vacuolation and other degenerative changes. The supernatant fluid after centrifugalisation agglutinated both *M. melitensis* and *B. abortus* to a titre of 1/1000. No organisms were found in films made from the centrifuged deposit, and none were grown in culture. Inoculation of a guinea-pig was without result, and the animal was in normal health three months later. It was subsequently killed and examined, but no evidence of tuberculosis or other disease was found.

A sample of milk from the goat was obtained for examination. Both the whole milk and the whey gave agglutination reactions with *M. melitensis* to a titre of 1/250 and with *B. abortus* to 1/500. Cultures made from the milk with a view to isolating the causative organism were unsuccessful.

Remarks.

The character of the fever in this case did not show such marked undulation as usually obtains in this disease. The occurrence of ascites with hæmorrhagic fluid was remarkable, and led to a suggestion, which was, however, disproved, that the patient was, after all, suffering from tuberculosis. It is possible that the effusion was associated with thrombosis of the portal vein, and in this connexion it is noteworthy that enlargement of the liver with jaundice and ascites has been seen by several observers, and is generally found late in the disease. It is interesting to note that several other persons, in addition to the patient, drank some of the goat's milk, but none of them contracted the disease.

LARGE MESENTERIC CYST IN AN INFANT.

REMOVAL; RECOVERY.

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THIS case is of interest on account of (1) the difficulty of diagnosis, (2) the successful result of an operation that was only undertaken as a forlorn hope on account of the great size of the tumour and the age of the patient, and (3) the pathology of the cyst.

A. L. D., a male infant, aged 4 weeks, sent by Dr. Sinclair Couper (Blackpool), was seen on Feb. 23rd, 1922, with a large tense, fluctuant swelling in the abdomen. The swelling had been present at birth and had grown steadily larger. There had been no vomiting and the bowels were regular. The child had been fed on dilute cow's milk and had lost ground in the last two weeks, during which slight œdema of the feet had developed.

Condition on Examination.—The baby was thin, with a strong cry. A round smooth swelling, very obvious on inspection, filled the whole abdomen except the left lower quadrant. The tumour was tense, fluctuant, and dull on percussion. Since the colon could not be palpated in front of it, the swelling plainly did not originate in the right kidney, but origin from the liver could not be excluded. As the swelling was evidently cystic, it was thought that operative measures might have a remote chance of success.

Operation (Feb. 24th, 1922).—Under nitrous oxide and ether anæsthesia, by Dr. K. B. Pinson, with preliminary subcutaneous infusion of normal saline, the abdomen was opened through the right rectus. A huge cyst was disclosed lying behind the peritoneum, with a coil of ileum stretched over the front of it. The liver and gall-bladder above it were normal. The cyst was punctured on the right side in a non-vascular area and some pints of clear fluid evacuated. The resulting collapse enabled one to see that the cyst was in the lower mesentery and had pushed the cæcum up into the left hypochondrium. The cyst wall was thick and muscular, and lined with a whitish membrane. Enucleation of the collapsed cyst was carried out gradually without tearing any of the main blood-vessels supplying the bowels. The dissection was tedious on account of a copious supply of small blood-vessels to the cyst and the friable nature of the cyst wall. When the entire cyst had been removed, the space between the two leaves of the mesentery was drained by a tube and the incision in the peritoneum sutured up to the tube. The abdominal wall was closed in layers.

Subsequent Progress.—Repeated subcutaneous salines were given for the first 24 hours, during which period the child showed signs of collapse. The tube was removed in 24 hours, and from the second day a steady improvement began, in spite of a superficial infection of the wound. In four weeks from the operation the child returned home in good condition with the wound healed. He has since grown into a strong and healthy boy.

Pathological Report.—The entire cyst was submitted for examination to Dr. (now Prof.) B. J. Ryrie, of the Department of Pathology, Manchester University, who reported as follows:—

Many sections of the cyst wall were examined. All showed a muscular and fibrous tissue wall; some showed definite epithelial lining. The different layers constituting the cyst wall were unequally developed in different parts, but the total structure, as seen in the most fortunate sections, consisted of: (1) a thick outer layer of unstriped muscle cut transversely; (2) a thin layer of connective tissue; (3) an inner layer of unstriped muscle parallel to the plane of section; (4) a layer of connective tissue of varying thickness tending to merge gradually with a more vascular and more cellular subepithelial connective tissue layer; (5) a lining layer of columnar or cubical epithelial cells.

The outer muscular layer was generally well developed. It showed varying degrees of fibrosis and hyaline change. The inner muscular layer was more variable. It was never entirely absent, but was in parts very largely replaced by fibrous tissue. It also showed areas of hæmorrhage, hyaline degeneration, and calcification. These changes tended to involve also the inner layers of the cyst wall, causing ulceration and calcification at the free inner surface. Such degenerating areas also were invaded by mononuclear or more often polymorphonuclear leucocytes, giving a more cellular appearance to the area and obliterating the structure of the wall. The epithelial layer was very patchy and imperfect. At one point it could be seen to dip down into the subepithelial connective tissue, but there was no true gland formation. The specimen was apparently an enterogenous cyst, with secondary degenerative changes in its walls.

C. N. Dowd,[1] in a well-known article on mesenteric cysts, gives a simpler classification of these cysts than earlier writers. He groups them into (1) embryonic cysts, (2) hydatid cysts, (3) cystic malignant disease. The varieties described as chylous, serous, and hæmorrhagic cysts he would regard as being of embryonic origin. He believes that the embryonic cysts arise either as rests from the ovary at an early stage of intra-uterine life, as in the case that he himself describes, or from the intestine.

There appears to be no room for doubt as to the enterogenous nature of the cyst in our case, and its position suggests that it may have arisen from the vitello-intestinal duct after the manner of a Meckel's diverticulum, becoming shut off, however, from all communication with the intestinal lumen. Higgins and Lloyd,[2] in a recent paper, consider that enterogenous mesenteric cysts arise more commonly from sequestration of diverticula from the intestine other than Meckel's diverticulum, but the fact that these cysts are found more often in close relation with the ileum than with the higher reaches of the small intestine appears to us to support an origin from the vitello-intestinal duct.

[1] Dowd, C. N.: Annals of Surgery, 1900, xxxii., 515-542.
[2] Higgins, T. Twistington, and Lloyd, Eric I.: British Jour. Surg., 1924, xii., 95-105.

Medical Societies.

HARVEIAN SOCIETY.

AT a meeting of this Society held on Nov. 12th, with Sir JOHN BROADBENT, the President, in the chair, Dr. J. D. ROLLESTON read a paper on the

Differential Diagnosis of Scarlet Fever and Diphtheria and Modern Methods of Treatment and Prophylaxis.

He illustrated the similarity between the two diseases by the fact that it was little over 100 years since Bretonneau distinguished between scarlatinal and diphtheritic angina and established diphtheria as a specific disease, and it was only since 1861 that deaths from diphtheria, as distinct from those due to scarlet fever, had appeared in the returns. At the present time the difficulty in distinguishing between the two diseases was shown by the large number of cases sent to fever hospitals certified to be suffering from diphtheria or concurrent scarlet fever and diphtheria, when they were really examples of scarlet fever pure and simple. In the course of a year 47 cases had been sent to one fever hospital certified as diphtheria, but were found, after admission, to have scarlet fever instead. Dr. Rolleston laid stress on the fact that diphtheria and scarlet fever coexisted much less frequently than seemed to be supposed. He had often noticed that his junior colleagues showed an excessive zeal in cultivating the throats of scarlet fever patients in the acute stage, regardless of the fact that more or less faucial deposit was the rule in scarlet fever of any severity. In a case of scarlatinal angina in which organisms were found morphologically resembling diphtheria bacilli, the virulence test should be applied before assuming that the case was one of concurrent scarlet fever and diphtheria.

Owing to the remarkably mild type of scarlet fever now prevalent in London it was exceptional at the present time to see a case of scarlet fever with severe angina. A severe epidemic of the anginose type of scarlet fever had occurred in Yunnan (South China) in 1921–22 and had caused 50,000 deaths in the capital Yunnan-fu alone. The disease had at first been mistaken for diphtheria and treated by antitoxin, especially as the rash was often absent or so slight as to escape attention. Apart from bacteriological examination, the chief distinctions between the appearances of the troat in scarlet fever and diphtheria were, as Bretonneau pointed out, first, that in scarlet fever the inflammation was widely diffused over the tonsils, palate, and pharnyx, and was not, as in diphtheria, circumscribed to one spot; secondly, that the inflammatory process in scarlet fever, except in a late stage of septic cases, showed no tendency to attack the larynx; and thirdly, that scarlatinal angina was liable to be attended by more or less considerable ulceration which was usually absent in diphtheria. The condition of the mouth and tongue was often of some diagnostic assistance. In scarlet fever they were usually in a dirty condition with strings of mucus between the tongue and the palate which interfered with a good view of the fauces. The general condition was also of some help in diagnosis. Scarlatinal angina was accompanied by continuous pyrexia and delirium, whereas in diphtheria the temperature, though it might be high at first, rapidly fell to normal, especially after injection of antitoxin, and the mind remained clear. The therapeutic test was often of considerable value. When in a case of supposed diphtheria the temperature tended to keep high in spite of repeated injections of antitoxin, the probability was against the angina being diphtheritic in nature and there was a greater likelihood, though by no means a certainty, of the case being scarlet fever.

Prophylaxis and Treatment.

In dealing with prophylaxis Dr. Rolleston emphasised the fact that scarlet fever was not nearly so infectious a disease as some of the other acute exanthemata, especially measles and small-pox. It was through inability to realise this fact that too much importance had been assigned to the Milne method of inunction of the skin with eucalyptus oil and the application of 1 in 20 carbolic oil to the tonsils, which had lately been proved by Dr. Milne's successor, Dr. G. Gushue-Taylor, to be valueless. After giving a short account of active and passive immunisation against scarlet fever and diphtheria, Dr. Rolleston said that the most important principles in the treatment of diphtheria were injection of antitoxin and enforcement of rest. The earlier the antitoxin was given the better the results. He had never known a patient die of diphtheria or even suffer from severe paralysis when antitoxin had been injected within 24 hours of the onset. Late cases required relatively large doses of antitoxin, and it was a mistake to suppose that antitoxin was useless after the fifth day, as had been alleged. In a series of 160 cases injected with antitoxin on admission to hospital after the fifth day the mortality was only 11·2 per cent., whereas in the pre-antitoxin era, even when patients were brought under treatment at the commencement of the disease, the mortality was never less than 28 per cent., and not infrequently rose to 50 per cent. or more. The presence of membrane in the throat, however late the disease, was an indication for serum treatment, the doses ranging from 4000 to 12,000 units in mild cases to 18,000 to 24,000 repeated two or three times in severe attacks. Intramuscular injection, preferably in the vastus externus, was the best method of administration of antitoxin for the following reasons: (1) it was quite as simple as the subcutaneous method, it ensured more rapid absorption, was less painful, and less liable to give rise to abscesses at the injection site; (2) it was superior to the intravenous route not only in the greater simplicity of technique, but also in the less rapid excretion of antitoxin after injection. Intravenous injection was accompanied in a large proportion of cases by rigors, vomiting, and collapse, and did not in practice, whatever its theoretical superiority might be, appear to have any advantage over the intravenous method.

In only a comparatively small proportion of cases—namely, 16·5 per cent. in a series of 2000—had Dr. Rolleston found it necessary to employ local treatment of any kind. From comparative observations he had found that the average period for the throat to become clean after injection of antitoxin was practically the same whether local treatment had been employed or not. The time that a patient should be kept in bed should be determined by the character of the acute attack. After mild angina this period need not be more than three weeks, but in attacks of any severity the recumbent position should be enforced for seven or eight weeks at least as being the best safeguard against paralysis. An exception could be made in the case of infants who never sat up unless they were fit, and therefore need not be restrained from so doing. Dr. Rolleston maintained that there was no justification for the routine administration of alcohol in diphtheria, as recommended by some authorities, especially in view of the fact that it was generally recognised by scientific clinicians that it had no stimulant action on the heart, respiration, or vital activities in general, while its continued use was liable to increase the myocardial degeneration initiated by the diphtheritic poison.

Discussion.

Dr. R. A. O'BRIEN referred to the usefulness of the Schick test in the diagnosis of diphtheria. Every patient admitted with frank clinical faucial and laryngeal diphtheria gave a positive response to the Schick test, and on examination his blood would be found to contain no detectable antitoxin. Thus, for a definite diagnosis of clinical diphtheria in any

instance of special interest, one would be entitled to ask proof that the patient was "Schick positive," that he had no antitoxin in his blood, that the course of the disease was typical, that the smear from an overnight culture made from a swab showed a preponderance of diphtheria bacilli, and that these bacilli proved to be virulent. In a number of instances reports had been received that people who were negative to the Schick test had afterwards suffered from frank clinical diphtheria. In every instance which the speaker had the opportunity of investigating it had been found that the Schick test result had been wrongly recorded, in some instances through the use of diluted toxin many months old, or that the clinical diagnosis was in error. With regard to the recent prohibition of active immunisation in Vienna owing to the Baden accident, the mixtures the speaker and colleagues had worked with had for a year or two past been made of toxoid and antitoxin. The toxin was first deprived wholly, or almost wholly, of its toxicity by treatment with formalin; it was then diluted ten times and a considerable amount of antitoxin added. The mixture still remained an efficient immunising agent and was, so far as test and experience went, a "safe" one. There was apparently some slight misunderstanding about the position of active immunisation in New York. In the course of health propaganda which was always going on in that city, it had recently been pointed out by the health authorities that the immunisation of children of school age was of great value, but that as a very large percentage of diphtheria occurred in children of pre-school age the time had now come for the public to realise that effort must be directed more especially towards the immunisation of young children through welfare centres, nurseries, &c. Active immunisation had, in the opinion of people in America, proved itself as a valuable aid to public health and it would be even more vigorously recommended to the public. The campaign had recommended itself to the financial judgment of insurance societies who had contributed considerable sums of money to the work.

Dr. C. C. OKELL gave a short description of the recent work of the Dicks and Dochez on scarlet fever and discussed some of the problems that have arisen from it. There was a possibility that more than one type of scarlet fever toxin might exist, but as yet there was no definite evidence on the point, and it was much more likely that the toxin was always the same. Five strains carefully examined by cross-immunity experiments showed no essential differences in the properties of their toxins. The practical bearings of the modern work on actual practice could be summarised as follows: (1) The Dick test divides those who are susceptible to scarlet fever from those that are not. (2) Active immunisation with toxin renders Dick-positive persons Dick-negative and presumably non-susceptible. (3) Potent antitoxic serum can be obtained in the horse which in 5 c.cm. doses temporarily renders Dick-positive persons Dick-negative and which in 40–50 c.cm. doses has a definite therapeutic effect on cases of scarlet fever. The newer knowledge had also an application to diagnosis, since early rashes of scarlet fever were for the most part blanched by intradermic injections of either horse antitoxin or of serum from convalescent patients. The Dick test itself was almost always positive in the first 48 hours of the disease.

Dr. GRAHAM FORBES confined his remarks to the subject of diphtheria and the question of the practicability of immunisation on an extensive scale in so large a centre as London. The recent decision of the London County Council not to include that preventive measure at present in their scheme of medical treatment of school-children was not unexpected in view of the difficulties which the problem presented in the matter of the numbers to be dealt with, quite apart from anticipated parental objections. Further, results were also awaited of the immunising work, chiefly in residential institutions, being done by the Ministry of Health and various local authorities in Great Britain, where up to date it was estimated that in all about 22,000 of the population had been Schick tested and some 4000 immunised, inclusive of 4500 of tested and 2000 immunised in the Edinburgh schools—figures which provided insufficient data in comparison with the high totals supplied by New York; there, since 1920, roughly half a million had been tested and one-third of the school population had been immunised. The outcome of such widespread prevention was being watched with the greatest interest, but the results were not yet regarded as entirely conclusive. Time would doubtless show how far immunisation was proving effective in the reduction of the incidence and mortality of diphtheria in New York. The decline in 1922 and 1923, which seemed to point to a marked improvement, had not apparently been maintained in 1924 and 1925.

New York.

Year.	Cases.	Mortality per 10,000 population.
1921	15,000	16·0
1922	10,000	15·0
1923	8,050	9·0
1924	9,687	11·9
1925 .. .. (6 months)	6,056	14·9

Dr. O'Brien, however, had informed him that the recent rise in New York had been forecast by Dr. Park as likely to be associated with a concomitant prevalence of measles, and to be expected from the large number of susceptible children, of former pre-school age and not previously immunised, now entering school and, therefore, coming in closer contact with possible infection. The example set by the Borough of Holborn, thanks to the initiative of the medical officer of health, seemed to point a way to obtaining the more widespread prevention of diphtheria in London if adopted by the authorities of other metropolitan boroughs.[1]

Considered from the purely financial aspect, it had been estimated that diphtheria alone in 1921 had cost the ratepayers no less a sum than £500,000. Even if it were possible or necessary to test the whole of the elementary school population (some 600,000) and immunise, say, 40 per cent., reckoned as susceptible, the total cost, he calculated, would not exceed a tenth of the sum spent on the present system of hospital isolation, treatment, and home disinfection. Therefore, by the introduction of immunisation, there was to be added to the hope of saving life and averting sickness the prospect of reducing heavy public expenditure.

BRITISH INSTITUTE OF PHILOSOPHICAL STUDIES.

THE Institute opened its winter session on Nov. 19th at the London School of Economics with a discussion on the

Idea of Responsibility, Legal and Medical.

The chair was taken by Mr. HAROLD LASKI, and Sir TRAVERS HUMPHREYS, opening the discussion from the legal side, limited his field to the medical aspect of legal responsibility and the criminal responsibility of a person for his own acts. A lawyer's business, he said, was to obey the law and not to criticise it, and he would therefore simply state the law of responsibility and the theory which he understood to underlie it. It was for the doctors to say what the law ought to be.

The Mens Rea.

The criminal law of the country was based on common sense, and the broad principle of responsibility was that a prisoner was regarded as responsible for his acts unless it was proved that he had not acted with a "mens rea," a criminal intent. A person would not be held responsible if he committed a crime

[1] See THE LANCET, Nov. 7th, p. 962, Dr. C. W. Hutt: Diphtheria Immunisation in a Metropolitan Borough.

in a state of somnambulism or hypnotism (unless he had himself hypnotised for criminal purposes), nor was he liable for an injury resulting from pure accident, though if a serious injury happened where a trivial one were intended he was held responsible because of his intent to harm. It had been found, however, in the course of legal evolution, that there was a class of criminals to whom this principle could not be applied; either they did not know what they were doing or else they thought that their action was perfectly lawful. They were thus legally "not guilty," but it was in the interests of society that they should be restrained from repeating the offence. These people were usually insane, and it became customary to record a special verdict in such cases, when the judge would order the accused to be detained for the state of his mind to be examined. This practice was subsequently regularised by law.

The McNaghten Ruling.

Insanity was notoriously difficult to define; many people were mentally unsound in some respects and not in others, or situated on the border-line. The famous McNaghten ruling was not new law, but merely a restatement of what had been legal for many years. The same principle was enacted in an Edinburgh trial of 1795. To plead ignorance of the nature of a serious crime was, of course, practically to plead insanity.

The Uncontrollable Impulse.

It had often been urged that the law should excuse a person who could prove that he committed a crime under the influence of an impulse which he was unable to control. The law certainly admitted no such plea at present, as a recent judgment of the Court of Criminal Appeal had emphatically declared; the Court further expressed the opinion that such a plea would have a subversive effect on justice. It seemed to be put forward only in murder cases. The difficulty in its application was the practical impossibility of establishing the fact of uncontrollable impulse by evidence.

Dr. WILLIAM BROWN spoke from the medical aspect of the question, and pointed out that the doctor could not escape from the problem, as the lawyer could, by disregarding all but the intellectual factor and making it an axiom that volition was the only test of responsibility for an act. An emotional factor had also to be considered. Many crimes were committed by people who knew well the nature and quality of their act, but who were nevertheless irresponsible through mental disorder. He instanced epileptics, melancholics, maniacs, and alcoholics. In a post-epileptic condition a butcher or soldier might commit a crime of violence through performing what was to him a habitual act. A melancholic who believed that ruin or torture were about to befall his family might deliberately murder them to save them from a worse fate, while the paranoiac might kill those whom he suspected to be plotting against him. Both would feel convinced that they were perfectly justified.

Individuals such as kleptomaniacs and exhibitionists knew that they were doing wrong, but suffered from compulsions so strong that the power of control of the normal man was insufficient to keep them in check. Psychological analysis showed that the events and phantasies of childhood and the repressions associated with them accounted for the impulses, so that in one sense the individual was responsible, but often less so than those who had brought him up. Responsibility must be put on the right persons, and collective responsibility was often as real as personal responsibility and as rigidly exacted.

The Question of Insanity.

Legal responsibility inevitably introduced the question of insanity as only the insane were held not responsible. Insanity was not a scientific concept; the scientific distinction was between the normal and the abnormal. Certification and legal "insanity" were concerned only with whether the individual were a danger to himself or others and depended to some extent on social position. To define abnormality was to enter the realm of metaphysics; science had to stop short of the problems of determinism and freedom, and assume that an individual's actions were explicable in terms of his heredity and antecedent acts. A normal man might be regarded as one whose whole heredity and life was a continuous progress towards the synthesis and harmonisation of his impulses. Most people, however, were abnormal, and the question was how far the law could take account of their abnormalities. At present it did so in terms of knowledge only. He wondered whether it would be a sufficient proof of uncontrollable impulse if the accused showed that he had had a deep analysis which revealed the source of these impulses. He illustrated his meaning from war-time court-martials on deserters. The phrase "tout comprendre est tout pardonner" was entirely wrong. Understanding made one realise the patient's difficulties but not think less of the crime. Responsibility was a matter of degree; a person in robust health was more responsible than an invalid. Psychologists did not want to abolish responsibility, but to redistribute it.

Discussion.

Mr. M. GINSBERG said that responsibility was intimately connected with punishment, and the only true test of responsibility was whether the man was capable of knowing at the time that he might be punished for it.

Mr. D. CARSWELL said that the McNaghten judgment had been abandoned in Scotland since 1870. He did not see that metaphysics and psychology had much to do with the question; it was for the jury to decide whether, considering a prisoner's mental state, it was fair to punish him.

Dr. T. B. HYSLOP declined to attempt a definition of insanity until the lawyers had defined responsibility. In his experience the question of responsibility was never put to a medical witness. A sane man might commit a crime under the influence of hypnagogic hallucinations, and he had known an epileptic hanged for murder. What might be good law was bad medicine, and he regarded the McNaghten ruling as an effete judgment.

Dr. BROWN, in reply, said that a man might be responsible to something beyond society, to his conscience, his ideals or his ideas of the cosmos, and that society might condemn him and be right according to its limited view of the situation. The distinction between the fanatic and the prophet was part of the work of deep analysis, which might thus help to solve the problem of responsibility.

ULSTER MEDICAL SOCIETY.

AT a recent meeting of this Society, Mr. J. A. CRAIG, the President, in the chair, Prof. J. E. MACILWAINE read a paper on

Hyperpiesia.

The speaker gave Allbutt's definition of hyperpiesia as essential or primary arterial hypertension and discussed the mechanism of its possible production, dealing with the rôle played by the nervous system, cerebro-spinal and autonomic, together with the vascular musculature and the associated myoneural junctions. He referred to the experimental production of the condition by hormones, adrenalin, pituitrin, and by protein metabolites such as guanidin, tyramin, and emphasised the variable relationship to true arterio-sclerosis as well as the distinct separation of hyperpiesia from the hypertension of renal disease. Special stress was laid upon the hereditary tendency as well as the association of the condition with a history of vasomotor instability in early life. The endocrinic adjustment occurring at the menopause was cited to illustrate the part these glands must play in the hyperpiesia of this period of life. The signs and symptoms which may be complained of were briefly recapitulated, and it was pointed out that in many cases they were so vague as to be indefinitely classed as neurasthenic. Referring to a previous paper read before the Society upon nervous mechanism in

disorders of the circulation, the speaker restated his assumption that in disordered action of the heart we had a toxic or inherent manifestation of instability in the autonomic nervous system which might be classified as a neurasthenic syndrome. To-day in the knowledge of the close association of psychic, psycho-motor and autonomic nervous system with the endocrine activities we might use a similar theoretical conception of an instability of this great controlling mechanism as a practical basis for the treatment of hyperpiesia. To relieve stress on this mechanism wherever possible should be the ideal, and he emphasised the primary importance of attention to the demand made by the assimilation of food on the autonomic nervous system.

Dr. S. BOYD CAMPBELL read a paper on

Aortitis, its Prognosis and Treatment.

The speaker, after referring to the frequency of a syphilitic ætiology in aortitis, showed a series of 35 cases which were first seen in 1919–20. All of these cases had at that time definite signs of varying degrees of aortic dilatation, in some cases definitely aneurysmal in character. Of the 35 cases 7 died; in 5 of these the death was associated with œdema and cardiac failure, and in 2 death was due to a ruptured aneurysm. Signs of failure of compensation are always of grave import. Antisyphilitic treatment, he said, depended on the case. In active lesions iodides and later small doses of mercury were used. Arsenical preparations should be given in small doses, starting with 0·3 g. If patient was kept in bed the dose was increased to 0·45 g., but if the patient was treated as an out-patient the 0·3 g. dose was not increased.

LIVERPOOL MEDICAL INSTITUTION.

AT a pathological meeting held on Nov. 19th Mr. W. A. THOMPSON read a paper on

Pyloric Stenosis of Infants.

He gave a short résumé of the various opinions held on the pathology of the affection, and explained how even when the condition was present at birth it failed to give rise to symptoms immediately because the pylorus was still unobstructed; later, under the influence of feeding, retention occurred; this caused enlargement of the mucosa, which further closed up the pylorus and induced added spasm. This increased the hypertrophy and the vicious cycle thus created brought about pyloric obstruction. The time required for this sequel of events varied from a fortnight to a month. According to the severity of the obstruction so the symptoms varied. The mild cases should be treated medically, the severe cases operated upon at once; whilst he advocated early operation on all moderately severe cases, since by this means an anxious period from 6 to 16 weeks was eliminated and the child was operated on when it was in the best physical condition. He was convinced that if this were done the mortality from this affection would be very small, as the majority of medical and surgical deaths came from this group. He described Ramstedt's operation and emphasised the importance of giving saline intraperitoneally. Ether was the anæsthetic used at his operations. He had performed Ramstedt's operation on 21 occasions with 19 recoveries. The two deaths occurred in greatly debilitated children.

Numerous specimens were shown, including a spinal cord tumour with lipiodol injection, by Prof. John Hay and Prof. R. E. Kelly; an acoustic tumour removed without facial paralysis, by Dr. Henry Cohen and Prof. Kelly; carbolic acid gangrene of finger, by Mr. Ashcroft; carcinoma of a reascended testis by Mr. Frank Jeans; and simultaneous chorion-epithelioma and adenomyoma of the uterus, by Dr. A. A. Gemmell.

STIRLING ROYAL INFIRMARY.—A new infirmary is to be erected at a cost of between £70,000 and £80,000, the existing building having become insufficient. A site of 15 acres has been acquired for £5200; the building fund now exceeds £52,000.

Reviews and Notices of Books.

THE SURGERY OF PULMONARY TUBERCULOSIS.

By JOHN ALEXANDER, B.S., M.A., M.D., Assistant Professor of Surgery in the Medical School, University of Michigan. Philadelphia and New York: Lea and Febiger. 1925. Pp. 356. 21*s*.

"THIS volume," says Dr. Alexander in his preface, "presents the entire subject of the surgery of pulmonary tuberculosis with the object of acquainting the medical profession with the principles and practical details that will enable it each year to save thousands of lives which certainly will be lost if surgery is not undertaken."

Dr. Alexander does, indeed, present the entire subject, and in a most thorough and painstaking manner. His book is not a record of personal experience—personal experience is, in fact, entirely omitted—it is an epitome of the experience of all the surgeons and physicians in the world who have interested themselves particularly in thoracic surgery. He has condensed the world literature, and from the number of his references we may gather that he has extracted the pith of 500 books, papers, and personal communications; he has also weighed and summed up the value of recent advances and of the various efforts that have been made towards further improvement in technique. His book, which is a great achievement, was awarded the 1925 quinquennial Samuel D. Gross prize by the Philadelphia Academy of Surgery.

Dr. Alexander emphasises the great need for a fuller understanding and appreciation of the value of the surgical methods available to-day. He says, with truth, that "there exists to-day among many physicians and patients a hazy notion that the shock and mortality from the 'rib operations' are terrific, the post-operative pain scarcely endurable, and the permanent clinical success a rarity. They believe that the survivors, grossly mutilated and crippled, may only hope to drag themselves through a few extra years of burdensome life. That the notion is not based upon fact will be evident to anyone who is informed on present-day technic and results." Dr. Alexander has collected 1159 thoracoplasties done during the period 1918–25. The results of these have been as follows: "Cured," 26·8 per cent.; improved, 24·4 per cent.; died from causes directly or indirectly connected with the operation, 13·2 per cent. There are, out of 1159 cases on whom the major operation has been done, nearly 500 "cured" or *greatly* improved. This is a remarkable record in view of the fact that scarcely one of these patients was expected to survive his disease by continuing with artificial pneumothorax and sanatorium régime. The author deals thoroughly with the indications and contraindications for the treatment he advocates. Artificial pneumothorax is compared with thoracoplasty, their respective merits being well summed up. Claus's epigram is quoted (p. 97): "A good pneumothorax is better than a thoracoplasty, but a good thoracoplasty is better than a bad pneumothorax." The following operative procedures all receive consideration: extrapleural paravertebral thoracoplasty (Wilms-Sauerbruch and Brauer methods); paravertebral thoracoplasty of the upper ribs combined with phrenicotomy, phrenicotomy, extrapleural pneumolysis, intrapleural pneumolysis, drainage of tuberculous lung cavity, tuberculous effusion and empyema.

The book should be read by all interested in the treatment of pulmonary tuberculosis.

INTERNAL SECRETIONS.

The Personal Equation. By LOUIS BERMAN, M.D. London: George Allen and Unwin. 1925. With 7 plates. Pp. 303. 8*s*. 6*d*.

EVERYONE who read "The Glands Regulating Personality" will remember the gaiety with which

Dr. Berman pursued his thesis that we are mostly the product of our endocrines and that by personalities and temperaments we may best be classified as pituitarians, adrenalists, and so on. He urges the same views in the present volume which in substance does not add much to his first book. And some of the zest seems to have gone from his exposition. It may be that the ideas are now less novel and exciting, but we cannot avoid a suspicion that the author's thyroid (or is it his pituitary?) may be beginning to fail.

A TEXT-BOOK FOR MIDWIVES.

Fourth edition. By JOHN S. FAIRBAIRN, F.R.C.P., F.R.C.S., Obstetric Physician to St. Thomas's Hospital. London: Humphrey Milford, Oxford University Press. 1925. With 3 plates and 113 illustrations, 5 in colour. Pp. 365. 25*s*.

THE author states in his preface that the alterations in the present edition are solely confined to those necessitated by the recent revision of its rules by the Central Midwives Board and by the issue of the regulations regarding the lengthened training which will shortly come into force. These rules are incorporated in the text wherever they apply and when necessary an explanation is given of their rationale. This is a commendable innovation which will prevent the pupil from learning these precepts by rote without understanding their practical application. The book as it originally appeared contained more than was necessary for the midwife. Since that time the period of training has been—or is shortly to be—quadrupled. Presumably a higher all-round standard of knowledge will be now required by the examining body, but this text-book will meet modern requirements in every way and will not need to be supplemented by larger works. Antenatal hygiene, the management of the lying-in woman, and the feeding of the infant are adequately dealt with from a practical standpoint. The last-named section is particularly useful and constitutes one of the best accounts of infant feeding to be found in any text-book of midwifery.

APHASIA.

Kritische Studien zur Methodik der Aphasielehre. By E. NIESSL VON MAYENDORF. Berlin: S. Karger. 1925. Pp. 108. M.6.

Dr. Niessl von Mayendorf's latest contribution to the aphasia problem takes the form largely of destructive criticism. It is divided into three parts, dealing respectively with the methods of localisation of Prof. S. E. Henschen, the question of agrammatism, and the theories of Prof. G. Mingazzini. In regard to the first of these, Henschen's view, briefly, is that lesions of the lower end of the left ascending frontal gyrus produce dysarthria, not aphemia (Broca's motor aphasia); lesions of the posterior end of the third left frontal convolution (pars opercularis frontalis) produce motor aphasia. Von Mayendorf is at pains to collate and analyse a number of the cases relied on by Henschen and to endeavour to show they cannot possibly bear the interpretation put on them by the latter. The view he advocates is that since words are commonly aroused in the auditory speech areas, it is unnecessary to postulate a motor speech centre apart from these; the defect of speech of many lower frontorolandic cases is simply the result of interruption of the path from the auditory area to the motor centres for innervation of the speech musculature. Dealing next with agrammatism, the author criticises adversely the well-known views of the late Prof. Arnold Pick, and concludes that agrammatism is nothing else than paraphasia, or, rather, is no more than the syntactical form of paraphasia. He adopts the view that both dysarthria and agrammatism (paraphasia) are restitution phenomena which appear "after the first acute stage of amnesia verbalis kinæsthetica is over." Finally, the views of Mingazzini, that in the lenticular nucleus is a "centre" disorder of which produces dysarthria or anarthria, and that in the frontal centrum ovale just outside that nucleus and extending across and in front of the internal capsule to the head of the caudate nucleus is an area lesions of which cause word-dumbness, are submitted to analysis in the same way as in the case of Henschen's views—viz., by an independent scrutiny of the cases on which Mingazzini largely depends. The conclusion is reached that of 22 cases supposed to favour Mingazzini's theories, not fewer than 21 also showed right hemiplegia, whence it is argued that "lenticular" theories are entirely unnecessary.

The matter of von Mayendorf's monograph does not lose any of its impressiveness by the emphatic and forceful, not to say caustic, language with which the arguments are clothed. His own theories, it may be pointed out, are, in respect at least of the non-existence of a special motor speech area apart from the rolandic centres for innervation and of agrammatism, open to no little criticism themselves. But his communication serves a useful purpose in drawing attention to the complexity of many recorded cases from which authors have unjustifiably made deductions of a pleasing simplicity to support favourite views of their own.

SCHISTOSOMIASIS VEL BILHARZIASIS.

By C. G. KAY SHARP, Chief Medical Officer, Education Department, Province of Natal. With a Foreword by Dr. J. B. CHRISTOPHERSON. London: John Bale, Sons and Danielsson, Ltd., 1925. Pp. 74. 7*s*. 6*d*.

THE incidence of urinary schistosomiasis in Natal and Zululand is a high one—in school-children, for instance, it may be 13 per cent.—though the severity of the disease appears to be not so great as in Egypt. Contrary to the general opinion, schistosomiasis is not confined to the coastal belt, for several cases recorded in this booklet have been contracted 4000 feet above sea-level and 150 miles inland from the coast. The intermediary hosts of the schistosome in South Africa are *Physopsis africana* and *Limnæa natalensis*. Few original views are expressed in this volume; the greater part is a compilation of the work of others and includes substantial quotations from popular text-books, while the section on treatment lacks such practical details as are required by the general practitioner. Not many of the illustrations are original. The absence of any scale showing the magnification of cercariæ is a defect, and the omission of a good illustration of the egg of *Schistosoma hæmatobium* is unfortunate. However, in directing attention of medical officers in Africa to the outstanding features of this disease and its method of spread a publication of this nature will serve a useful purpose.

THE SLEEPING CHILD.

Über den Schlaf des Kindes. By Dr. PAUL KARGER, Privatdozent for Diseases of Children in the University of Berlin. Berlin: S. Karger. 1925. Pp. 50. M.2.40.

A BRIEF introduction on the general characters of the sleep of the normal child, with its more or less normal periods of alternating quietude and movement, its depth and duration, and with an interesting discourse on the night movements of plants, animals, and man, is followed by a series of personal investigations of an objective kind on the sleeping child in health and disease. An apparatus resembling in part the familiar self-registering barometer was used, the recording point on the drum, which moved by clockwork at the rate of 4 cm. an hour, being connected up by a simple method with the framework of the bed or cot. Every movement of the child communicated a vibration to the bed which was thus recorded on the graph. A large series of these are reproduced in the book, and their comparison is instructive. The effect of various hypnotics and sedatives was also thus graphically measured. The method is practically useful and capable of extension.

COLLOIDS.

An Introduction to the Physics and Chemistry of Colloids. Fifth edition. By M. L. HATSCHEK. London: J. and A. Churchill. 1925. Pp. 183. 7*s.* 6*d.*

THIS well-known little book was first published in 1923, being based upon a series of lectures delivered by the author at the Sir John Cass Technical Institute. Until quite recently it was the only small English text-book upon the subject. Within the last few months some rivals have entered the field, but Dr. Hatschek's volume is far too well established to fear competition. The volume deals with colloidal chemistry as a whole, and provides a readable introduction to a complicated subject. The new edition has been brought quite up to date, and includes a lucid account of the work of Porter and Hedges on the vertical distribution of particles and more importantly of the recent work upon absorption. The theories of L. Michaelis, Freundlich, and J. Loeb are carefully considered; indeed, we find no omissions of any consequence and the balance is well maintained.

Laboratory Manual of Elementary Colloidal Chemistry. Second edition. By M. L. HATSCHEK. London: J. and A. Churchill. 1925. Pp. 153. 7*s.* 6*d.*

THE subject of colloidal chemistry is usually taught by means of lectures, with possibly a few demonstrations. The student hardly ever performs experiments himself; the difficulty of devising an adequate course may partly account for this lack of practical work. The object of Dr. Hatschek's laboratory manual is to provide a book of elementary instructions for practical classes; the course prescribed is well suited to the needs of elementary, general, and medical students, since the experiments are arranged so as to lead to a definite sequence of ideas. After an introductory chapter on apparatus, exercises on dialysis are described. Correct details are given for the preparation of dialysis membranes, and for the carrying out of a series of experiments upon typical colloids. The student is then taken through the preparation of typical suspensoid sols, suspensions, and other general properties. Ultra filtration, Tyndall phenomenon, and the electrical behaviour of colloids are dealt with in a series of simple illustrative procedures. The principles of absorption and the Liesegang phenomenon are also described with examples. Everywhere the accounts are accurate and instructive, and there can be no doubt that this book, which has now reached its second edition, is a worthy companion to the volume noticed above.

IMMUNO-CHEMICAL STUDIES.

Edited by CARL H. BROWNING, Professor of Bacteriology in the University, and Director of the Laboratory of Clinical Pathology, Western Infirmary, Glasgow. London: Constable and Co. 1925. Pp. 239. 12*s.* 6*d.*

THE objects of this volume are carefully defined in the preface by the editor, Prof. C. H. Browning; it is intended as a summary of the work of the Glasgow school upon the humoral aspects of immunity. Practically the whole of the information contained in the book has been published in various journals by the contributors. In many cases the articles are reprinted almost word for word, but the editor believes that their collection under one cover is likely to be appreciated by workers in this field. The volume opens with an introductory chapter by Prof. Browning upon antibody action in general. This consists of a summary of the general principles of immunity, and of the chemical basis of the reactions so far as known. The succeeding chapters consider in detail the factors of immunity, such as the properties of antigens and antibodies, opsonic action, and the final chapter deals with complement. The subject is difficult, and one which lends itself readily to confusion. In this volume, by means of careful classification and excellent summaries at the end of each chapter, the editor and contributors have kept the argument clear. The references are well selected and will be of great value to anyone engaged in immuno-chemical researches. The volume as a whole represents an admirable and laborious piece of work.

HYPERKINESIS.

Der hyperkinetische Symptomenkomplex und seine nosologische Stellung. By Dr. KURT POLISCH. Berlin: S. Karger. 1925. Pp. 92. M.6.

THE subject of this little volume is a synthetic and analytic study of cases of psychosis characterised by restlessness, inability to keep still, motor agitation, and hyperkinesis generally. A distinction is drawn between hyperkinesis in the sense of the neurologist—viz., chorea, athetosis, tremor, tic-like movements, and so forth, and the much more general character of the "psychomotility" of the author's psychotic cases. He alludes to the types of movement seen recently with some frequency after attacks of epidemic encephalitis, but concludes that in respect of them also a distinction should be made from the "pseudo-spontaneous" movements of his patients, which are more closely allied to those of some mental defectives—dancing and rotatory movements, pacing up and down, and so on. The essential difference resides in the fact of the hyperkinesis being accompanied by unmistakable psychotic signs, such as amnesia, mental confusion, hallucinations, and being therefore psychogenic in origin. Out of a large series of cases two main groups are separated: (1) those in which hyperkinesis was the major symptom and in which only one attack occurred; (2) those in which recurring attacks took place. Ætiological evidence is adduced associating the phenomena in many instances with infections. The author concludes that the hyperkinetic psychosis, so to call it, occupies a position midway between the exogenous and the endogenous psychoses; however this may be, he has clearly made out a case for the further study of this interesting clinical type on the basis of the peculiar character of its intrinsic features.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY.

Thirteenth edition. By W. A. NEWMAN DORLAND. London and Philadelphia: W. B. Saunders Company. 1925. Pp. 1344. 37*s.* 6*d.*

THE preface to this revised and enlarged edition of Dr. Dorland's admirable dictionary states that since the last edition appeared there has been no "let-up" in the appearance of new terms in medical literature. Some 2500 new words have been added, several hundred of them from the terminology of dentistry, which seems to be going apace. Certainly, no medical word in current use, however new, seems to be missing from the dictionary, and the few omissions, which we have noticed in previous editions, have been made good. We are especially glad that the great scientific repute now associated with the name of Banting has at last led the compiler to admit that the Banting of the anti-fat diet was an undertaker (the word used is "coffin-maker") and not a physician. Pseudo-coxalgia is now included with a cross-reference to its various synonyms. Curiously enough, the confusion in regard to the several bearers of the name Schwartz(e) and their operations remains unresolved. Perhaps the word "stent" of the new prosthetic surgery might deserve admission. Stent was, we believe, an American dentist who invented a plastic material for taking impressions, a resinous compound which sets very hard; the word is now used to mean the impression itself, and in plastic work denotes a little mould used to hold a graft in place. In spite of the vast area of knowledge covered—there must now be more than 50,000 definitions and 120 tables—the dictionary remains of moderate size and pleasant to handle. In this its latest form "Dorland" will retain its old friends and find many new friends.

NEUROLOGICAL STUDIES.

Etudes neurologiques. Deuxième série. By GEORGES GUILLAIN, Professor of Clinical Neurology in the Paris Faculty of Medicine. Paris: Masson et Cie. 1925. Pp. 360. Fr.26.

WHEN the first series of these studies appeared in 1922 it was favourably reviewed in our columns, and general comment was then made on the advantages of the clinico-pathological method as practised by the French school with conspicuously good results ever since the days of Charcot. Prof. Guillain follows worthily in the succession of Maîtres whose labours combined to raise the repute of the Parisian school of neurology to its present high level. In this volume he pursues the same method of precise clinical examination correlated with equally careful pathological research. Among his papers herein collected are many of which the neurologist has already taken note; 40 in all, they range over the whole field, and include the description and study of the phenomena of a new reflex, the medio-pubic reflex; a case of callosal tumour (splenium) of an unusual kind; a series of communications on disseminated sclerosis and on Parkinsonian cases; and numerous others too varied to specify in detail.

While some are quite brief they are none the less informative; the majority date between 1922 and the present year, though a few belong to an older period. We hope that Prof. Guillain will continue to furnish the neurological world with similar essays, in which the graceful style of the author is used to impart valuable information of abiding interest.

JOURNALS.

BRITISH JOURNAL OF SURGERY.—The October issue opens with Sir D'Arcy Power's eighteenth Eponym on Thomas Bryant's ilio-femoral triangle and its diagnostic value.—R. Lawford Knaggs, in a series of able Hunterian lectures, has added very considerably to our knowledge of those bone diseases grouped around osteitis fibrosa. This issue contains his lecture on osteitis deformans, and having described its clinical picture and its histology he shows how close is the relationship between Paget's disease, osteitis fibrosa, and osteomalacia.—E. Rock Carling and J. A. Braxton Hicks contribute a paper on two cases of cyst-adenoma of the pancreas, one an operation case and the other found post mortem.—H. P. Winsbury White discusses the pathology of hydronephrosis, particularly of the pelvic type, and suggests that most of these cases have an underlying inflammatory cause.—F. G. Bell completes his survey of the pathology of the tumours of the testicle with a description of the carcinoma group.—Lymphaticostomy in cases of bad peritonitis is the subject of two papers by C. Hamilton Whiteford and Arthur Cooke. Though short, each paper makes it clear that this method of treatment is by no means satisfactory, nor is it clear that the original experiments in dogs on which it is founded can be proved correct.—The longest and by far the most important contribution is a Consideration of the Hypophysial Adenomata, by N. M. Dott and Percival Bailey, with an introductory note by Harvey Cushing. Their work is based on 162 cases of these tumours and is a brilliant example of the value of correlation of the clinical and histological findings. They give an exact description of the different types of tumour—the chromaphil and chromophobe adenomata and the mixed ones. It is found that the chromaphil group give acromegaly, while the chromaphobe produce hypopituitarism, and the mixed type show a mixed clinical syndrome. The authors have put the treatment on a rational basis for the first time.—F. R. Brown reports a case of a right duodenal hernia successfully operated on, thus giving the fourth recorded recovery.—B. C. Maybury and S. C. Dyke record two cases of urinary papillomata which spread by implantation, one in a hydronephrosis which resulted from the primary operation, and the other in three separate places in the abdominal wall after a suprapubic cystostomy.—The following rare or obscure cases are reported: 1. A Strangulated Femoral Hernia in Association with an Appendix Abscess in a Hernial Sac, by Norman Hodgson. 2. Two Cases of Hernia Through the Transverse Mesocolon, by F. S. Heaney and G. C. E. Simpson. 3. An Unusually Large Tumour of the Breast, by W. E. Tanner.—Section 2 of the Pathological Atlas contains further examples of the malignant diseases of bone, and begins the benign series with the chondromata.

A Liverpool surgeon writes to point out that Mr. F. T. Paul's "Selected Papers" were published not by "the surgeons to Liverpool Royal Infirmary," but by "the surgeons of Liverpool." The list of subscribers includes the name of every surgeon and assistant surgeon of the Liverpool voluntary hospitals.

PROCEEDINGS OF THE ROYAL COMMISSION ON NATIONAL HEALTH INSURANCE.*

(*Continued from p. 987.*)

Provision of Extended Medical and Allied Services.

(App. CIII. and Q. 23830-24024.)

Mr. L. G. Brock, C.B., and Dr. Smith Whitaker, on behalf of the department of the Ministry of Health concerned with the administration of medical benefit, attended before the Commission to answer questions arising out of the evidence of various witnesses. They presented a memorandum of discussions on certain of these questions which took place at five conferences convened by the National Health Insurance Commissioners in 1919. These conferences were held not only with the recognised representatives of insurance practitioners, but with various consultants and specialists, some of whom were nominated by the Joint Committee of the Royal College of Physicians, London, and the Royal College of Surgeons of England, and the Society of Medical Officers of Health, which had been conferring with the Government as to the working of the Ministry of Health Bill.

Grants had been voted by Parliament in 1914 for extra services in connexion with the insurance medical service and included provision for a service of medical experts, general practitioner clinics, laboratory services, &c. These grants were suspended owing to the war, and the conferences of 1919 were convened partly in view of the possibility of the revival of such provisions and partly because of the prospective early constitution of a Ministry of Health.

In the memorandum the question was examined of the possibility of some provision under the control of a public authority of the services under the following heads: (1) expert "out-patient" medical services; (2) ancillary services of skilled persons not medically qualified—e.g., nurses and masseurs; (3) general practitioner clinics; (4) referees and supervisory medical officers; (5) laboratory facilities; (6) treatment in residential institutions (as in-patients).

Under the first head questions of the necessary limitations both as to the range of service and the persons to whom it should apply were examined and also the nature of the checks which would have to be imposed to prevent excessive demands. It was recognised that the medical personnel of such a service would have to be selected and that remuneration would have to be on a time basis. The chief purposes for which general practitioner clinics might be set up were indicated to include joint surgery accommodation, facilities for second opinions and for special study, and also subsidiary centres at which treatment might be given by specialists attached to the clinics.

* References to the paragraphs in the printed statements issued as appendices to the reports of the oral evidence are given thus: "App. X. 69," and references to the oral evidence thus—Q. 1369.

The object of the discussions having been expressly stated to be the free exploration of the important subjects discussed and not the formulation of or agreement upon any definite proposals, no definite recommendations emerge, but it may fairly be inferred that those taking part in the conferences were satisfied as to the practicability (if financial considerations permitted) of setting up public services of the kinds referred to.

Specialist and Consultant Services.

Mr. Brock was asked whether an extension of medical services, as urged by witnesses, to include a specialist and consultant service was desirable, if the necessary funds were forthcoming, and, if so, how such a service could best be provided. He said that there were several reasons which made some extension very desirable if funds were available. The out-patient departments of the hospitals did not cover the ground; there was not sufficiently close touch between the general practitioner and the hospital specialist; and thirdly, such a service would have a valuable educative effect on the general practitioner.

As to the method, it was thought that the service would best be secured by the provision of consultant centres at which specialists in different subjects would attend, payment being made on the basis of so much per session. Such a system would also allow of arrangements being made to provide at those centres ancillary services such as treatment, massage, electrical treatment, and radiography. Where the patient was well enough to travel to the centre it would ordinarily be much more economical to pay for his conveyance than to pay for the conveyance of the doctor. Where a domiciliary visit was asked for, probably in the great majority of cases all that would be required would be a visit by an experienced general practitioner, the type of doctor who would normally be called in by his colleagues in the locality in any case of difficulty.

A rough estimate of the cost of this service was 2*s.* a head of the insured population, to include provision for domiciliary attendance, or about £1,250,000 for England and Wales, including about £100,000 for laboratory services for aids in diagnosis. It was not thought that a system based on contracts with the hospitals would work satisfactorily, but it would be very desirable to utilise hospital premises by renting them wherever possible. The utmost importance was attached to communication between the general practitioner and the consultant.

Treatment of Dependants.

Mr. Brock said that if a complete medical service, short of institutional treatment, were going to be provided for insured people, it must emphasise the anomaly that at present their wives and dependants can only obtain such medical treatment as they are able to pay for. It seemed, however, open to question whether an insurance system which left a good many sections of the population out of account was the best way to provide for the case.

If it was proposed to provide either a general practitioner service or a complete medical service for the whole industrial population, there are strong arguments in favour of providing this service out of local funds and making it available to all sections of the population who desire to take advantage of it. . . . If such an extension of State or municipal medical service is contemplated, then the whole basis of payment and the method of organisation of that service would require to be reviewed.

The contingency appeared, however, too remote to call for any detailed examination.

An Income Limit for Manual Workers.

With regard to the British Medical Association's proposal that a limit of income should apply to manual workers, the witness pointed out that insurance at the present time depends not on total income, but on rate of remuneration; the distinction was very important, because the rate of remuneration is something which is ascertainable now, but total income is something which is only ascertainable in arrear. He said that to apply an income limit to manual workers the majority of whom are necessarily subject to the risk of unemployment, would in the Ministry's view be a quite unworkable scheme.

Hospital Provision.

Mr. Brock said that if out-patient departments were, in fact, providing, except in emergency, for cases falling within the competence of the insurance practitioner, they had only themselves to blame.

But there is ground for believing that indirectly the Insurance Acts have increased the demand on the hospitals, because the institution of a general practitioner service has, I think, to a large extent broken down the old dread of entering a hospital, and has led to a demand for operative treatment at a much earlier stage than used formerly to be the case.

In the view of the Ministry it would not be desirable to attempt to include institutional treatment in the Acts as a statutory benefit. To provide the whole cost of in-patient treatment of insured persons would be extremely costly, and there is the difficulty that a statutory benefit implies some guarantee that the required accommodation will be available when it is needed.

Any scheme which resulted in preference being given to a particular class, however large that class might be, must in our view be prejudicial to the voluntary system. The voluntary hospital appeals to everybody at present, because at present in theory it is available to everybody.

With regard to the pressure on the bed accommodation Mr. Brock said:—

The amount of avoidable suffering and of unnecessary claims on the sickness benefit funds, of course, cannot be calculated, but it is safe to say that in the aggregate it is very considerable, and a more effective use of the bed accommodation already existing in Poor-law hospitals is urgently needed both as a matter of economy and even more as a matter of humanity.

It would, however, certainly not be safe to say that this would make up the deficiency in the provision of beds, partly because the vacant Poor-law beds are not always in the area where the demand is greatest.

As to the standard of equipment in the Poor-law infirmaries, Dr. Smith Whitaker said:—

I am immediately responsible for the work of the medical officers who inspect the Poor-law infirmaries, and while I have not gone into the matter closely, I certainly have not gathered from their reports that there is such a low standard of equipment of Poor-law institutions, taking them generally.

(*To be continued.*)

DONATIONS AND BEQUESTS.—Mrs. Martha Sarah Gatfield, Ross, Herefordshire, who left £6808, bequeathed one-fifth thereof to the Hereford Hospital and the London Hospital.—The Manchester Public Health Committee have adopted a recommendation to contribute £1000 for the work of cancer research in the city.—Mr. Henry George Hill, Bristol, ironmaster, who left £293,893, bequeathed £1000 to the Bristol Royal Infirmary, and £500 each to the Bristol General Hospital and the British Benevolent Institution.—Mr. Robert, Killaloo, Londonderry, besides other bequests, left £1000 to the Londonderry Borough Infirmary. After other bequests he left the residue of his estate as to one-third to the Londonderry County Infirmary and one-third to such charitable institutions as the trustees of his will may determine.—The trustees of the late Colonel John Barlow, of Bury, have given £4000 to Preston Infirmary, especially for the accident ward, in view of the fact that the institution is called upon to take into account cases from a much wider area than that from which it draws its funds.—During the past month the Royal Manchester Children's Hospital has received a legacy of £1500 from the late Mr. William Henry Armitage, and £341 from Queen Alexandra flower festival.—Mr. Joseph Harriman, Leicester, left £500 to the Loughborough and District General Hospital and Dispensary, and £500 upon trust for the poor and infirm people of the parish of Shepshed.—Mr. James Chapman, manufacturer, Sheffield, who left £40,146, directed that, after certain bequests, the residue of his property be given as to two-eighths each to the Sheffield Royal Infirmary, the Sheffield Royal Hospital, the Jessop Hospital for Women, and one-eighth each to the Sheffield Free Hospital for Sick Children and the Blind School, Manchester-road.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 28, 1925.

THE DEATH OF QUEEN ALEXANDRA.

THE death of the Queen-Mother at Sandringham House on Nov. 20th has left its impression in every home in the country, for the Danish Princess who came to England 62 years ago to wed the PRINCE of WALES had identified herself more than any royal person had done before with the life of the common people. Owing to the spread of wireless equipment her progress was followed from hour to hour by a populace for whom she had become the embodiment of beauty and gracious service, and the wireless announcement of her death produced a spontaneous outburst of sympathy for the KING and the Royal Family.

Sympathy for others was an outstanding feature of Queen ALEXANDRA'S nature, and these personal experiences did much to divert her genuine philanthropy into practical service. Her determined and unflagging efforts to alleviate and prevent misery continued throughout her long life, and the names and records of countless institutions commemorate the share she took in the work for which the nation constantly thanks the Royal Family. Her contribution to the efficiency of military nursing was in itself notable. At the beginning of the South African War the astonishing influence of FLORENCE NIGHTINGALE had not yet borne its full fruit, and the War Office did not provide anything approaching a suitable equipment of nurses for the front. Had it not been for the voluntary work of civilians the conditions in South Africa would have been even worse than they were, and in this work the PRINCESS of WALES took an important part. Realising that unreadiness was causing much preventable suffering and endangering lives which should be saved, she was beforehand with the War Office and insisted upon a substantial contingent of nurses being sent out from London hospitals to South Africa. Not only was the nursing of the wounded during the campaign placed on a more satisfactory basis, but both the country and the Army were awakened to the need for reform and better organisation.

The war was no sooner over than Queen Alexandra's Imperial Military Nursing Service was established to provide primarily for the nursing of sick soldiers in time of peace and, also, to form the basis of a larger organisation in time of war. To this was added a reserve service as the first means of expansion in the hour of need. Later there was set up Queen Alexandra's Army Nursing Board to which is committed the oversight of the entire military nursing service, and in 1921 Queen Alexandra's Military Families' Nursing Service was started to look after the welfare of the wives and children of Service men. Similar Queen Alexandra Nursing Services were established for the Navy and for India, and immediate descendants of these organisations are the Nursing Services which have been created for the Air Force and the Territorial Army. In all of them the Queen-Mother took the keenest personal interest, and she had an active part in the details of their establishment. But these are not the only positive achievements in the realm of nursing that the country owes to the eager alertness of a mind at once profoundly benevolent and essentially practical. It was at Queen ALEXANDRA'S instance that the Finsen light was brought from her native land to the London Hospital. She gave the hospital the first lamps and so was the means of introducing into England that cure of lupus by light which might otherwise have tarried. Her work for the London Hospital, of which she was President for the last 21 years of her life, was both public and private. To the full she used the healing touch that Royalty still possesses. She would go to Whitechapel at very short notice, and delighted to walk through the wards and chat with the patients, her face irradiated by sympathy and by the friendly smile which meant much to those whose share of pity and sympathy had often been small. To the nurses she was an equally welcome visitor. She realised the nature of their trials and fatigues, and it was often said that she would herself have made an excellent nurse. The number of hospitals, nursing and charitable institutions in which Queen ALEXANDRA took a more or less direct interest was great, and it is not surprising that her name should have been attached to curative institutions in such widely sundered lands as Canada and Burma. "Alexandra Day" is certain to keep her name fresh in the hearts of future generations who will erect the worthiest memorial to her, and that which she would best have appreciated, by continuing and enlarging the help to hospitals and other charities which flows from this annual expression of England's affection and reverence for the best beloved of all her adopted daughters.

A NEW JOURNAL OF EUGENICS.

IT is now more than 30 years since the appearance of the first of the series of memoirs in which Prof. KARL PEARSON has proved what valuable service the mathematician can perform in the general field of biology. At the beginning of this period, such researches—sufficient to occupy the whole time and establish the reputation of most men—were the parergon of a teacher and active investigator of applied mathematics, but, for the past 16 years, as first Galton Professor of National Eugenics, Prof. PEARSON has devoted the whole of his energies to the invention and application of exact quantitative methods to the study of biological problems, above all of the problems of human biology. Much of the gigantic output of himself and his pupils has, naturally and rightly, been methodological; the equipment of a factory must come first. Many of these methods have been invaluable to workers outside the biological field, but they were devised for biological ends, and in no year has the Galton Laboratory failed to produce results as well as methods.

The tools of this intellectual factory are now so numerous and so sharp that its manager feels justified in making new provision for the distribution of output. The *Annals of Eugenics*, the first two parts of which have recently appeared,[1] will be devoted wholly to the scientific treatment of racial problems in man; bibliographical matter will be reduced to a minimum, no other topics than the problems of race in man will be dealt with, and the papers published will be the work of trained scientists. It is to be expected that a majority of the papers will be statistical, but that good papers which are not

[1] Vol. I., Parts 1 and 2, October, 1925. Pp. 256, with four plates. Francis Galton Laboratory for National Eugenics, University of London. 35*s*.

"mathematical" will not be excluded is shown by the inclusion in the first issue of an interesting pedigree of Epicanthus and Ptosis, the work of Dr. C. H. USHER. Mr. ANTHONY HILL contributes a study of the movements of the birth- and death-rates in England and Wales since 1838, and in Sweden since 1749, which shows that the inter-connexion of these rates is a much more difficult thing to interpret than some enthusiastic neo-Malthusians would have us believe. In fact, he says, "taken as a whole the evidence is that, apart from the secular trend, there has been but slight connexion in either country between the death-rates and the birth-rates closely following them, over the period of time for which the statistics are available." The bulk of the number is devoted to two memoirs (each to be continued), one by Prof. PEARSON and Miss MARGARET MOUL on the Problem of Alien Immigration into Great Britain, illustrated by an examination of Russian and Polish Jewish children, the other by Miss ETHEL M. ELDERTON on the Relative Value of the Factors which Influence Infant Welfare, based upon data provided by the medical officers of health for Rochdale, Bradford, Blackburn, Preston and Salford. In the former memoir the question is posed whether it is expedient to permit unrestricted immigration of aliens into this crowded land unless they possess some racially desirable character to a degree above the average of our own population. A thorough investigation of school-children leads to the conclusion that Jewish immigrants from Eastern Europe do not fulfil the postulated condition. Miss ELDERTON'S equally careful study of the medical officers' data leads to the conclusion that purely environmental factors are, as a whole, far less influential upon infant welfare than factors which are presumably inborn. These two memoirs are, we think, of a high order of merit, indeed worthy of their authors' scientific reputation; as high praise as can be accorded to any contribution to statistical science. Nobody who has not worked through such papers with a calculating machine beside him is competent to offer detailed criticism.

In their article on the Immigrants Prof. PEARSON and Miss MOUL have correlated a large number of pathological or quasi-pathological characters (condition of cervical glands, tonsils, ears, signs of tuberculosis, heart trouble, defective teeth) with intelligence. Most of the coefficients are insignificant and, they say, "to sum up we have not succeeded in finding any relation of real prognostic value between intelligence and such pathological characters as we have been able to measure." Robust anti-eugenists may regard this as an admission that Nature does not improve the racial average of intelligence when she uses tuberculosis, for example, as a means of selection, or alternatively that "intelligence" is not of racially important survival value. Perhaps the truth is that we have not such exact knowledge of the after-fates of school-children with pathological stigmata as we usually suppose. Continuous health records telling us what happens after the children leave school are a crying need. Perhaps the time will come when Prof. PEARSON and Miss MOUL can treat in the same detail school and adolescent populations. We conclude with one tiny caveat to Miss ELDERTON. Although, like all scientific statisticians, she warns us against assuming that causation and correlation are identical, she does sometimes use language that implies that correlation between cleanliness of home depends upon health of mother. "In Blackburn the delicate mother seems able to keep her home clean." May not "dirty homes" sometimes have meant conditions beyond the power of the most robust housewife to remedy? The dirty home may have been the antecedent rather than the consequent term. Dr. W. McC. WANKLYN'S remark may be recalled: "Persons so placed may make some effort, and wear out body and soul in the process, or they may just sit down, as it were, and give it up; the task is too hopeless, too impossible for any human being. They lose heart, they lose hope, they lose self-respect. It is an oft-told tale, but none the less true. They become bankrupt both in money and in self-respect. That is one of the principal causes of the insanitary conditions found in houses let in lodgings." We are not quite sure that the argument of p. 143 really surmounts the difficulty.

We wish the new journal that prosperity which the merit of its first numbers should ensure and heartily congratulate the editors on its form and contents.

HEALTHY GERM CARRIERS: LIBERTY AND THE LAW.

A GRAVE problem of public health administration is raised by incidents like the recent outbreak of typhoid fever at Streatham, where 27 persons were infected by a woman milk-seller who, though herself healthy, was an unconscious germ-carrier. "We have no power to keep her in permanent isolation," said Dr. F. G. CALEY, the Wandsworth medical officer of health; "she is actually a person in good health. All we can do is to prevent her going back to the milk business and handling any kind of food for sale." Even greater difficulty is suggested by a recently reported American case,[1] where a sailor on board a fishing schooner appears to have been the unconscious cause of six cases of typhoid fever amongst the crew. The man was not a food-handler at all. What powers would a medical officer in England have in such a case?

There are powers in our public health legislation for ensuring the notification of certain diseases and for preventing the spread of infection. There are well-known sections devoted to the limited purpose of protecting food-supply by restraining the employment of persons likely to spread infection. Local Acts often contain provisions which go still further, and sometimes compensation may be awarded to persons who, as sources of infection, are induced to give up their trade.[2] Specific references to the "carrier" are rare as yet in the general legislation of the country. Articles XIII. and XV. of the Public Health (Pneumonia, Malaria, Dysentery, &c.) Regulations of 1919 give certain powers to medical officers of health who suspect that anybody employed in preparing or handling food or drink for human consumption is "a carrier of dysentery infection" or "a carrier of enteric fever infection." They may notify the manager of the business that it is necessary to examine the suspected person, and the Regulations enjoin that everybody concerned is to give the medical officer all reasonable assistance. If the medical officer thus discovers a carrier of dysentery or enteric fever he may notify the carrier's manager and the carrier himself with a view to preventing his further employment in that business for a specified period. On receipt of such notice the person addressed must comply with its terms. These Regulations give the usual general powers for securing the treatment of fever cases in suitable hospitals, but there is nothing specific as to the isolation and treatment of the healthy carrier, nor do the Regulations apply to any carriers except those engaged in preparing or handling food or drink.

[1] Public Health Reports, vol. xl., No. 42 (Oct. 16th, 1925).
[2] See, for example, S. 102 of the Wakefield Corporation Act of 1924.

Similar provision was made for Scotland in 1919, but two years later (as we noted at the time[3]) the Scottish Board of Health took a definite step in advance of England. It cancelled its provisions as to dysentery and enteric fever carriers and issued the Public Health (Infectious Disease Carriers) Regulations (Scotland) of 1921. These defined a "carrier" in relation to a particular infectious disease to mean "a person who has within himself the germs or other infective virus of that infective disease, but has no other sign or symptom thereof, and is certified to be a danger to others in terms of these Regulations." To make a man a carrier for this purpose in Scotland he must first be certified by a medical officer of health and one other doctor as dangerous by reason of the probability of his spreading infection. Certification is for three months, with power to re-certify on re-examination. On the carrier's side a fresh examination may be demanded at any time on giving notice to the medical officer, and there is a right of appeal to the Board. The important point is that, so long as anyone is a carrier of an infectious disease, the Scottish Public Health Act and the Regulations made thereunder apply to him as they apply to a person actually suffering from that disease. The effect is that, by the application, for example, of Sections 54–56 of the Scottish Act, if the carrier is without proper lodging or is so lodged that proper precautions cannot be taken against spreading infection, he can be removed to hospital and detained there; moreover, he incurs a penalty—though the maximum (£5) is trifling in comparison with the cost of an epidemic—if he wilfully exposes himself without proper precautions. The Scottish Regulations, however, stop short of compelling the carrier to undergo prescribed treatment. We must look overseas for a stronger lead. New South Wales, under her Public Health (Amendment) Act of 1921, made Regulations in 1922 which begin with a similar definition. "A carrier shall be any person having in his nose or throat, or in his excretions or discharges, germs of any infectious disease, although presenting no signs or symptoms of the disease." They provide for authenticating the presence of disease germs by bacteriological tests, and for compulsory medical examination of the carrier by a medical officer of health or authorised medical practitioner. They enact that carriers may be placed under medical surveillance, or isolated and detained if necessary to prevent the spread of infection. Anyone who has been formally notified that he is a carrier is forbidden to take part in the preparation, handling, or serving of food or drugs, or the handling of vessels or receptacles used for that purpose. Moreover, the carrier must obey such instructions as a medical officer of health or an authorised practitioner may specify, for such period as is directed. This last provision is indispensable. To know that a carrier has been tracked down in a district and that an eye must be kept upon his activities is something, but it is not enough. There should be power to isolate and treat him just as much as if he were an actual sufferer from the disease which he is liable to disseminate. The individual must put up with inconvenience in order that the many may not suffer through him.

There seems no reason why the Ministry of Health might not legislate along these lines by regulations issued under its existing statutory powers. Section 130 of the Public Health Act of 1875, which corresponds to Section 78 of the Scottish Act of 1897, is surely wide enough. But do we know the extent of the problem? Are carriers of fever infections in England to-day to be numbered in tens or in hundreds or in thousands? And, if special institutions are provided for their isolation and treatment, will there not be obstinate cases in which prolonged detention will have all the appearance of imprisonment for life? If this be so, the law courts will probably be inclined to say that the liberty of an outwardly healthy and morally blameless person is not to be taken away by mere departmental ukase, but that if Parliament intends the healthy carrier to be incarcerated Parliament must say so. Until there is something specific upon the statute-book judges can hardly be blamed for thinking more of habeas corpus than of *Bacillus typhosus*. Meanwhile, if it is true that healthy carriers cannot legally be segregated against their will, still less can they be subjected to compulsory surgical operation. It may be reasonably proved that operations (tonsillectomy, for example, in cases of diphtheria carriers or removal of the gall-bladder in cases of typhoid carriers) offer a fair prospect of cure. Even if it were enacted that healthy carriers must submit themselves to prescribed treatment, the question of surgical operations would require careful handling. It might strike the public mind as too suggestive of those advanced American States which (on paper, at any rate) adopt the eugenic principle of sterilising their degenerates. With the recent Streatham case fresh in its memory, this country might be willing to empower the detention of the healthy carrier till such time as he can be certified as innocuous, all medical and surgical facilities being offered him in order to expedite his cure and release. Some years ago several American States passed a measure for compulsory notification, examination, quarantine, and treatment (backed by fine, imprisonment, and liability in damages) in respect of venereal disease. This country has not shown itself ready to follow suit. One of those States (Iowa), as an alternative to quarantine, allowed the patient's release on bond of 1000 dollars on condition that he would not expose anyone to infection, would continue his treatment till cured, and would observe all rules and regulations prescribed. It was an interesting experiment, but in this country we shall do more by appealing to the good sense of our countrymen who have the misfortune to be germ-carriers than by exacting money bonds from them.

[3] THE LANCET, 1921, i., 452.

PUBLIC HEALTH ADMINISTRATION.

SHOULD the Rating and Valuation Bill now before Parliament become law, the Ministry of Health has stated its intention of reviewing the question of percentage grants to local authorities for health services. The new proposal, outlined in a letter addressed by the Minister to municipal authorities, is to devise a scheme by which a fixed grant covering a period of years is made to the local authority, to be expended upon whatever health work the authority chooses, provided that a recognised standard of efficiency is maintained. The same letter intimates the Government's intention to make one local authority responsible for the finance of each sanitary area; as it is, municipal finance may at any moment be upset by the activities of boards of guardians over which the council has no control. Expression is also given in the letter to the Government's conviction that if the total health and hospital provision in any area is to be effectively and economically worked, it must be handled as a whole by a single health authority. The Government scheme therefore proposes to institute a single set of local authorities in the various areas of local government with provision for coördinated action. These proposals bring one stage nearer the reform of the Poor-law in the sense of the Minority Report of the 1905–09 Commission.

ROYAL DENTAL HOSPITAL OF LONDON, SCHOOL OF DENTAL SURGERY.—The annual clinical "at home" was held at the Royal Dental Hospital on Nov. 21st, when about 80 patients attended. There were shown various conditions of clinical and scientific interest, including pathological conditions of the jaws, teeth, and associated parts; cases illustrating the relation of dental to general disease, cases of orthodontic interest and prosthetic cases. Mr. F. St. J. Steadman gave a very successful demonstration of regional anæsthesia and there was also a display of specimens, models, and X ray photographs. About 250 visitors were present.

Annotations.

"Ne quid nimis."

EXPERIMENTAL CANCER RESEARCH.

IN the twenty-third annual report of the Imperial Cancer Research Fund which we notice on another page, Dr. J. A. Murray, F.R.S., the director, refers to the publication in THE LANCET of July 18th, 1925, of the paper by Dr. W. E. Gye as the outstanding event of the year. He summarises Dr. Gye's conception of the ætiology of cancer in the following terms:—

"The essence of Dr. Gye's conception is that malignant growth results from the concurrence of two factors—an ultra-microscopic microbe and an unstable chemical factor derived in his experiments from propagated malignant tumours of animals, and it would be erroneous to regard either of these factors, singly, as the cause of cancer. The direct evidence of this dual origin of new growths has so far only been furnished for the Rous fowl sarcoma and for a transplantable sarcoma of the mouse. For other tumours the evidence is indirect, cultures of these supplying the ultra-microscopic microbe, the specific unstable chemical factor being supplied by an extract from the Rous fowl sarcoma, in which species of animal the two injected simultaneously gave rise to progressively growing sarcoma. Injected singly, they are inert. The delicate racial and tissue specificity governing the transmission of malignant new growths therefore attaches to the labile chemical factor, and not to the microbe. One of the gravest objections to previous forms of the parasitic hypothesis of cancer is thereby met. These experiments have only been possible by the use of the propagated animal tumours which are sufficiently exempt from ordinary bacterial contamination, and it is a legitimate source of satisfaction to this Fund that their prevision in maintaining this material over many years, including the war period, should have received its due acknowledgment and reward.

"It is obvious that this dual conception of the ætiology and pathology of cancer, should it be confirmed, introduces a new orientation in every aspect of the cancer problem: statistics, epidemiology, causation, prevention, and treatment."

Dr. Murray states that the workers of the Fund have, at Dr. Gye's request, undertaken a critical repetition of his fundamental experiment, and he deprecates premature speculation and anticipation in view of the fact that the new problems are susceptible of direct experimental study. But we may perhaps be allowed to express the opinion that everybody interested in the cancer problem—and there are many—will look forward to the next annual report of the Fund with the keenest interest.

Of the work published during the past year two papers are specially referred to by Dr. Murray. It is now recognised that cancer of the skin can be produced at will in mice by repeated painting of a localised area of the skin with tar. If this is repeated over many months several times weekly about 70 per cent. to 80 per cent. of the animals will after five to nine months develop a typical skin carcinoma. Dr. Findlay has found that even the single application of hot tar may, in exceptional cases, produce cancer after a long period of time—about a year. The tar no doubt remained in the traumatised area for a prolonged period of time. But from the clinical point of view it is interesting to have an experimental demonstration that a trauma due to a single extraneous intervention may be responsible for the genesis of cancer. The second investigation referred to deals with the theory which has been propounded that cancer is due to a loss of nervous control over a group of cells. Malignant new growths are not efficiently innervated, if indeed they contain any nerves at all. The cells of the normal skin, on the other hand, are supplied with a very rich network of fine nerve-fibres. It has been suggested, therefore, that the origin of cancer is to be found in this difference; in other words, that normal cells become cancerous or, at least, predisposed to cancer when they escape for some reason or other from nervous control. This view was submitted to an experimental test by Dr. W. Cramer, who denervated an area of skin and then submitted it to chronic irritation by tar-painting. It was found that the denervated area responded to tar-painting by the production of tumours not more rapidly but much more slowly. It is clear, therefore, that absence of nervous control does not predispose to cancer. On the contrary, it seems to retard the genesis of cancer. It would appear from these observations that in the production of a tar tumour we are dealing with the effect of a chronic irritant not on the epithelial cells only but on the tissue as a whole. Owing to the fact that these experiments necessarily extended over many months and that during that time a gradual nerve regeneration took place in the denervated area it was not possible to determine whether a permanent absence of nerve control would completely inhibit the genesis of cancer. These results would appear to be in keeping with the regression or limitation of the growth of a cancer which has sometimes been obtained in man by denervation.

To the superficial observer it may seem remarkable that the production of cancer by the laborious application of tar should still occupy the time of investigators while acknowledgment is made of the revolution in cancer research introduced by the work of Dr. Gye and Mr. Barnard. It is obvious, however, that any new knowledge must be harmonised with what is already known, and furnish a rational account of the way in which cancer arises from normal tissues, before it can be recognised as an adequate solution of the problem of the ætiology of malignant new growth.

GASTRO-ENTEROLOGY IN SPAIN.

THE subject of special clinics and hospitals for special diseases is being discussed with increasing frequency in medical circles in this country, and a point seems to have been reached when the advocates of so-called all-round knowledge have come to defend with increasing vigour those portions of the human body whose study has not yet been seized from them by otologists, neurologists, dermatologists, cardiologists, urologists, and other specialists. The outcome is yet to be seen, but it has already become somewhat remarkable that special departments for diseases of the endocrine organs, the alimentary tract, and metabolic diseases are not to be found in London. Opinion may differ as to whether this is desirable or not. Advocates of further specialisation will, however, be interested in a recent Spanish publication which we have just received.[1] The Madinaveitia Institute at Madrid was recently created for the closer study and appropriate teaching concerning gastro-enterology, endocrinology, and the disorders of nutrition. It comprises a large out-patient clinic and 12 wards, where upwards of 400 severe cases are treated in the course of each year. The X ray and laboratory equipment are of the latest pattern, and the yearly reports contain matter of high scientific interest. The article on the surgical treatment of gastric ulcer, by Dr. Urrutia, contains a learned survey of the present opinion of surgeons in all countries on this subject, and it is instructive to note the growing interest in the operation of gastrectomy, and the increasing suspicion as to the ultimate value of gastro-enterostomy prevalent in Spain. Dr. Carrasco Cadenas has contributed an article on the diagnosis and treatment of diabetic coma, and his insistence on the diagnostic value of estimation of the alveolar CO_2 tension is sufficient proof of the deep attention being given to the subject. Dr. Cadenas is emphatic concerning the necessity of giving large and repeated doses of insulin during coma, and shares the scepticism of other authorities concerning the value of bicarbonate administration. The laboratory examination of cases with deranged gastric, pancreatic, or hepatic function is conducted by Dr. H. G. Mogena, who contributes three excellent articles to the annals of the Institute. By a special technique, carried out with the aid of the X rays, this observer has been

[1] Anales del Instituto Madinaveitia. By Drs. Urrutia, Carrasco Cadenas, Madinaveitia, and Mogena. Vol. I. Madrid: Editorial Paracelso. 1925.

able to introduce duodenal sounds with rapidity and precision, and calls attention to the facility with which the duodenum can in this manner be filled with barium and useful pictures obtained in cases where ulceration is suspected. He has also been able in many cases to demonstrate hepatic insufficiency by the delay in appearance in the bile of tetrachlorphenolphthalein after intravenous administration of that dye. Altogether the first volume of the reports of the Institute will be received with deep interest in this and all other countries where the progress of medicine excites sympathy.

BIOLOGY OF POPULATION GROWTH.

IT is an interesting fact, coming within the experience of most scientific workers at one time or another, that a conclusion on any subject reached by apparently unassailable logic often turns out to be erroneous when detailed practical experimentation is substituted for theoretical exposition. The common jibe of "armchair critic" indicates that this experience is not infrequent in other departments of life. In this connexion the overwhelming logic of some of the arguments put forward by Malthus are no exception, and the obvious difficulties attendant upon controlled population experiments over a long period of time are probably sufficient reason why so much of what Malthus taught is accepted by many of his unquestioning followers at the present day. Prof. Raymond Pearl is not one of these; his painstaking and laborious investigations into some of the problems of applied biology are sufficiently well known to demand great respect, for his writings and his ingenious work with flies for carrying out population experiments in a laboratory to some extent get over the apparent difficulties of putting Malthusian doctrines to a scientific test. It was the "compelling logic" of the argument that the prophesied increase in human population would be bound to lead to an increase in the sum total of human misery and wretchedness that first aroused his suspicions, and in a new book[1] he has carried his previous work a step further by analysing in considerable detail the course of population among the indigenous tribes in Algeria over a period of 75 years of recorded census history. As a result of this and of other work already referred to on the fruit-fly, and further investigations in the experimental population of hens, he has reached certain important conclusions. He first shows "that populations grow in size according to the same mathematical law that individual animals and plants follow in the growth of their bodies in size." Further, "human populations grow according to the same law as do the experimental populations of the lower organisms," and the trends of the birth-rate and death-rate amongst the Algerian natives have been what would have been expected on certain mathematical considerations as expressed in the form of a logistic curve. The evidence necessary to establish these conclusions represents an enormous amount of labour, but Prof. Pearl and his collaborators have gone further and endeavoured to establish the biological causes influencing the shape of this curve. Evidence is brought forward to show that both for the lower organisms and for urban populations of human beings density of population will adversely affect the rate of reproduction. The economic factors of wealth by indirect psychological and social effects tend to express themselves in the sexual activity of human beings, and through sexual activity n birth-rates. With all this evidence and with the certain fact before him that "the human population of the world is going on increasing for a long time to come," Prof. Pearl is beginning to feel very uncertain as to the "inevitable misery doctrine" to which at one time he appears to have adhered. He now maintains that this doctrine overlooks certain important facts. In the first place, the great increase in population of recent years in various countries, and in the world as a whole, has not led to such a marked increase in squalor and wretchedness and general unhappiness as would have been expected. "Even allowing for the misery entailed by the great war," he writes, "it is surely true that at no previous time in the recorded history of mankind was so large a proportion of the population on the whole so happy, and so socially and humanely well off as they are right now." The reason for this is said to be, first, in the orderly evolution of human knowledge; applied biology is still in its infancy, and "one hears no note of pessimism from the chemists." Secondly, the adaptive potentiality of the human organism appears to be largely ignored, and yet it seems to be the crux of the whole matter. The new situations beginning to arise by the threat of over-population will be met by adaptation to environment. Birth control Prof. Pearl defines as "an intelligent adaptive response to an environmental force, population pressure." Public health and hygiene are further examples of these adaptive processes already at work. The comparative optimism of Prof. Pearl's conclusions is perhaps the most striking feature of his latest work, and both his work and his conclusions demand close attention.

[1] The Biology of Population Growth. By Raymond Pearl. New York: Alfred A. Knopf. 1925. Pp. xiv. + 260. $3.50.

LIPIODOL IN BRONCHO-PULMONARY DISEASE.

REFERENCE was made in THE LANCET last week to certain advances in the use of lipiodol in cerebral localisation. In the present issue Dr. Carlos Heuser, of Buenos Aires, describes his application of Sergent's method to the diagnosis of early pregnancy and to find out whether the Fallopian tubes are patent. But this is not all. Recent work in Canada indicates that in the diagnosis of broncho-pulmonary affections there is opening up an extended field for the use of this iodine-containing oil. Introduced first in France by Sergent and Cottenot for radiological investigation of bronchiectasis, and described first in this country by Armand-Delille and A. Moncrieff,[1] lipiodol has been increasingly used for the diagnosis of this particular disease, while a warning against its possible adverse influence on tuberculous lesions of the lungs has been uttered by the French workers. Dr. D. H. Ballon, however, in a recent paper,[2] points out that this theoretical objection, based upon the danger of pulmonary congestion from the iodine, has not been substantiated in his experience. Further, he maintains that the intratracheal route favoured by Armand-Delille and his co-workers, while perhaps justifiable in children, has no justification in the case of adults when a bronchoscope in skilled hands presents a much more satisfactory method. One part of a 20 per cent. solution of cocaine and two parts of 1 in 1000 adrenalin are used as a local anæsthetic for the pharynx and larynx, and bronchoscopy is performed on the radiographic couch. The instrument is passed beyond the vocal cords, and after further anæsthetising the operator injects about 30 c.cm. of warmed lipiodol through a long syringe. X ray pictures are then taken in various positions, the oil being moved by gravity to any particularly indicated part of the lungs. No discomfort appears to result from the lipiodol; the lung is remarkably tolerant, although there appear to be personal idiosyncrasies for the oil. No ill-effects have been noticed on tuberculous lesions, and lipiodol has been employed in certain cases described by Dr. E. Archibald in the same journal for determining the suitability of these patients for operative interference. Such surgical measures as thoracoplasty for the collapsing of cavities in the lungs are being undertaken more frequently, and the exact localisation of the extent and situation of such cavitation rendered possible by the use of lipiodol has an obviously important bearing on these procedures. In particular, in patients in whom such an operation as total posterior thoracoplasty has been performed, for example, two or three years previously, the new bone formation, irregularity of the chest wall, and thickening of the

[1] Brit. Med. Jour., 1924, ii., 7.
[2] Canadian Medical Association Journal, October, 1925, p. 995.

pleura render any subsequent ordinary radiogram of the thorax particularly obscure. If such a patient has a recrudescence of symptoms, as occurred in the three cases described by Dr. Archibald, accurate diagnosis is impossible without the use of lipiodol injection. This recent work is of importance in introducing a comparatively harmless method of injecting lipiodol and in establishing the fact that this oil is apparently non-irritant even to tuberculous lesions. The application of both these facts still further extends the use of this already useful substance.

ABDOMINAL LEVELS.

IT is a commonplace of information, not only among surgeons and anatomists, but also among students, that the abdominal viscera are not always arranged within the cavity in absolute accordance with the simple plan that adorns all anatomical diagrams of the contents of the belly. We are not referring to the morphologically interesting examples of abnormal situation which are met with occasionally, but to what may be termed exaggerated lowness of levels with normal general arrangement. The transverse colon, placed in the pictures above the umbilicus, is more often found below—and well below—that point, and the stomach levels are no less striking in their variations. Anatomically, it would seem natural to give to these freely movable viscera a wide latitude in levels, associated with changes in the content of small intestine, and reserve narrow limits of "normality" for the colon on each side, where it is secondarily fixed to the dorsal wall. Among the interesting papers presented at the meeting of the Anatomical Society on Nov. 20th was one by Prof. R. J. Moody, who has been for some little time in this country. He had been able, by radiological methods, to estimate the position of the stomach, colon, and edge of the liver in 1000 students in California and, in demonstrating his results before the Society, showed how much these normal and healthy young people differed in respect to the positions of these viscera from what is usually accepted as the correct description. His material ranged in age from 16 to 25, male and female, and included athletes and gymnasts. None seemingly had any abdominal weakness or complaint. The average lowness of level of the organs mentioned, rather more marked among the women, would seem—even if all allowances are made for the conditions of X ray work on the one hand, and for those of the dissecting room subjects on the other—to call for the admission of much greater extent in range of level, and of possible lowness in individual level, than is generally conceded. The anatomists present appeared to have no objection to such conclusions. Radiologists have been instrumental in many ways in modifying some of the rigid conceptions held by the older school of formal anatomists, especially in the abdominal domain, but much more work and observation is required before the divergence of opinions in some cases can be reconciled. It is well that the formal anatomist should freely recognise the range of informality in the living body.

THE SURGEON IN BATTLE AT SEA.

IN the *Military Surgeon* for October Rear-Admiral E. R. Stitt, the well-known Surgeon-General of the U.S. Navy, writes on the work of the naval surgeon in battle at sea. He opens with a story of the loblolly boy of the *Chesapeake* in her famous action. The loblolly boy was, in the British Service also, precursor of the sick-berth staff, loblolly being vernacular for the gruel he brought to the sick. After a glance at the medical preparations made by Augustus, as he became, at Actium, Admiral Stitt remarks that Hadrian's triremes (with a complement of 200 men) had each a surgeon, who received twice an ordinary officer's pay and hence went by the name of *duplicarius*. In the eleventh century barbers practised on board ship, and later Venice put surgeons and physicians in her galleys. In the wooden man-of-war the medical station was in a protected place below the water line. In those days British and Colonial ships-surgeons scalded their amputating knives, thinking by doing so to diminish the pain of the cut, and so anticipated Lister. In the Chinese-Japanese War the medical station was single, and it is on record that all the doctors and medical equipment of a ship were sometimes lost by a single shell explosion. Dressing stations were thereafter divided and put behind armour. The first "hospital for battle" was provided in the plans of the *Tsarevitch* in 1903. Admiral Stitt recounts the horrors of the defeat at Tsushima, when the ship *Askold* had one dressing station in the torpedo room, and two auxiliary stations, forward and aft, in charge of "feldshers," a word which recalls the "field shearer" or barber. Even at Jutland the ship's barber was among the ambulance party on *Seydlitz*. After reviewing reports of many recent naval engagements, Admiral Stitt concludes that two or more dressing stations must in future be available below the protective deck, and in the latest ships of the U.S. Navy a third is planned for the engine-room. Accessibility is difficult to attain now that ships are so much cut up into small sections as a protection against poison gas. For the same reason it must be possible to shut off the plenum ventilation without a moment's delay. A perfect stretcher for naval use is still wanting; Admiral Stitt mentions the Neil Robertson with approval, but in the future the wounded seaman may be removed on an ambulance aeroplane and the naval hospital ship come to resemble the aeroplane carrier. Every naval medical officer will be grateful to the Surgeon-General of the U.S. Navy, to whom we already are indebted for an admirable laboratory manual, for the picture he has given of life on shipboard in past times, and for his glimpse into the future.

NINETEENTH CENTURY SCIENTISTS.

BURNS'S well-known aspiration that we might see ourselves as others see us is one which workers in the field of natural science should bear in mind. There used to be a popular idea (it has nowadays almost disappeared) that science, as opposed to other fields of thought, was generous to fellow workers, was never dogmatic, did not know the meaning of heresy, and was ready to receive new ideas with open mind. This view of science was contrasted with the conventional views of religion, and the popularity of such "tenth rate" books (the epithet is Mr. Murray's) as Draper's Conflict between Religion and Science showed that this view had gained much ground. In the book [1] before us Mr. Murray, a parish priest, a widely read man, and by internal evidence a mathematician, pins out science in the nineteenth century on the dissecting table and sets out with cold precision the failings, the quarrels, the heresy hunts, and hidebound convictions of scientists to one another. His book is not pleasant reading, but, like many a bitter medicine, it should do good. The faults which Mr. Murray shows up so unsparingly may not be at present in evidence, but history shows that they are likely to recur. Sir Oliver Lodge, who has contributed an introduction to the book, gives the matter of it in a nutshell: "Surely the world of science is free from prejudice and is ever ready to welcome truth! So we try to think. But is it so? Does history bear this out?" Mr. Murray answers the question in the negative. He takes the lives and works of nineteenth century leaders in science—Jenner, Simpson, Lyell, Helmholz and Joule, Darwin and his predecessors, Pasteur and Lister, and a numerous band of others ("forgotten scientists" he calls them)—and shows how one and all met with bitter opposition or, still worse, with studied neglect from their fellows. Mr. Murray might have included in his list the John A. R. Newlands, who discovered and published papers on the Periodic Law, provisionally styled by him the Law of Octaves, some five years before Mendeléeff and Meyer, and whose work was received with derision. Occasionally one who had fought and conquered

[1] Science and Scientists in the Nineteenth Century. By the Rev. Robert H. Murray, Litt.D. London: Sheldon Press. 1925. Pp. 450. 12s. 6d.

neglect or opposition to his own work (we forbear to cite instances), so far from profiting by discipline, proved just as bitter towards a new seer as any of his fellows. Mr. Murray's book is a store-house of information upon nineteenth century science; it is a work which should be read by everyone interested in human nature.

POLYCYTHÆMIA RUBRA AND X RAYS.

WE publish in this issue of THE LANCET an interesting and suggestive note by Dr. S. W. Patterson, physician to Ruthin Castle, North Wales. He gives a clinical record of a patient suffering from polycythæmia rubra, associated with high blood pressure and blotchy non-pruritic rashes. The treatment adopted consisted of a lacto-vegetarian diet, the administration of 1 gr. of thyroid twice a day, and intestinal douching twice a week. X ray treatment to the long bones was given twice weekly, on 25 days for eight minutes each, during a period from July 4th to Oct. 17th, diathermy being applied to the hands and feet on the other four days a week. The treatment seems to have been dramatically successful, the red cells being diminished from over 7,000,000 per c.mm. to normal, and the blood pressure from a systolic level of 204 mm. Hg and a diastolic of 120 to normal, the improvement being associated with a marked sense of well-being. Nine months after treatment the improvement has persisted, the blood count still being normal. The condition of polycythæmia rubra is an extremely interesting and somewhat obscure one. Since the year 1923 when Osler first clearly defined the condition, after its previous description by Vaquez, Cabot, and others, a great deal of attention has been paid to it, and it is probably somewhat more common than it was originally supposed to be. A routine examination of the blood in patients with florid appearance and high blood pressure would probably reveal more cases in an early stage. The association of high pressure with polycythæmia has long been familiar, and a form was described by Geisböck as polycythæmia hypertonica. There are two special points of interest about Dr. Patterson's case. First, the persistence of the good results of the X ray treatment, and secondly, the remarkably good effect of this treatment upon the raised blood pressure. The first of these may possibly be due to the fact that the case would appear to have been comparatively mild in degree with only just over 7,000,000 red cells per c.mm., and thus possibly was discovered in an early stage. The beneficial effects upon the blood pressure support the suggestion made by Dr. Patterson that this method of treatment is worth trial in cases with high blood pressure apart from this disease, especially those associated with some increase in the red cells and heightened viscosity of the blood.

ROYAL SOCIETY OF MEDICINE.

THE annual banquet of the Royal Society of Medicine, held at the Hotel Victoria, London, gave its President, Sir StClair Thomson, the opportunity to set out something of the great part played by the Royal Society of Medicine in the life of the community. He described the Society as a guild for the diffusion of knowledge in the science and art of medicine, the gold being dug in practice, in hospital wards, in laboratories and museums, as well as garnered from the progress of neighbouring sciences; but it was, he said, the function of the Society to test this gold, to mint it, and to put it into circulation. He spoke of the developments likely to take place under the management of the new whole-time secretary, Mr. Geoffrey R. Edwards, B.A., who had already made arrangements for keeping the library open during the long vacation, and for making it available on two evenings a week up till 10 P.M. It is, as the President remarked, not only the chief medical library of its kind in the Kingdom, but the most complete medical library in the Empire. But he also took the opportunity of acknowledging once again the signal services of the late secretary, Sir John MacAlister, whose 38 years of ungrudging and loyal service came to an end in April last. It was during this period that the removal took place of the old Medico-Chirurgical Society from "two or three stuffy rooms" in Berners-street to a building in Hanover-square, followed by the federation of this Society with 17 others into the Royal Society of Medicine. In the last session, as he remarked with some pride, the Society and its sections held 171 meetings and discussions attended by 6800 members, while the library was visited by more than 20,000 readers, and 3054 parcels of books were sent carriage free to members in the provinces and abroad. Not that he was content with the present position, for he spoke enviously of the recent endowment of the New York Academy of Medicine with half a million pounds jointly by the Carnegie Corporation and the Rockefeller Foundation. This gift was enabling the Academy to maintain a bureau of clinical information and a committee for post-graduate medical education, enterprises both of which the Royal Society of Medicine would gladly undertake, should the means be forthcoming. Mr. Neville Chamberlain, the chief guest at the banquet, in proposing "The Royal Society of Medicine," spoke of the immediate need for the establishment of a post-graduate school in London, and bespoke the good will of the Society for this project. With the help of the committee over which he was to preside as Minister of Health, he thought that the difficulties which had so far baffled endeavours might be surmounted. At the conclusion of the banquet a portrait of Sir John MacAlister, by Mr. Eric Kennington, was unveiled by Miss Williamson, his assistant secretary, and the Jenner medal of the Society was presented to Dr. S. Monckton Copeman.

BERNHARD NAUNY

Bernhard Naunyn was for more than a generation one of the foremost leaders of medical research in Germany, but when he died in July last, at the age of 86 years, he had so long survived his co-workers, and, indeed, many of his pupils, that his death passed almost unnoticed. Naunyn qualified from the School of Medicine in Berlin, he began his long clinical career with Frerichs, one of the founders of the Clinic of Internal Medicine, and succeeded him as the leading exponent of this branch of investigation. In 1871 he founded with Schmiedeberg, at Berne, the *Archives of Experimental Pathology and Pharmacology*, in which his aim was to further the principle of making the clinic itself the arena where pathological questions were solved and applied. He held most emphatically that the problems of illness belonged to the clinician alone, and that although the clinician was indebted for help and method to the physiologists, pharmacologists, pathologists, and bacteriologists, he must be "master in his own house." He was only in Berne for a year, but during that short time he made many close friends, and remained a lover of Switzerland for the rest of his life. His next chair was in Königsberg, and in the year after he occupied it he contracted an ideally happy marriage with his cousin Anna, who survives him after inspiring his best work for 52 years. His time in Königsberg was the happiest and most fruitful of his life. Here he published works, that are now standard text-books, on the echinococcus, toxæmia, fever, and the effect of high altitudes on the hæmoglobin, and laid the foundations of all later work on diabetes and diseases of the liver. He worked from 1888 to 1904 in Strasbourg, and then spent the last 20 years of his life, a period when most men of his age are past work, in research on the colloid chemistry of the gall-stone. The reaction and diffusion of crystalloids and colloids in a colloid medium is at once one of the most interesting and one of the most difficult aspects of colloidal chemistry, and it was Naunyn who first showed that the "facetting" of a gall-stone was due not to pressure from outside, but to a chemical process. His mental acumen remained unimpaired to the last, and he was still equal to the most abstruse chemical problems

when he died. He has been described as "a clinician body and soul." He knew that the ultimate application of medical science must be practical, at the bedside, and that science which could not be thus applied was not worthy of the name. As far as speculation solved problems or set them he was not averse from it, but had no use for it in itself. He was one of the most severely practical research workers that there has ever been. He disliked the whole field of modern psychotherapy, holding that to treat it as a separate study was misleading and dangerous, for it was an inseparable part of medical practice. His last published work, entitled "Thanks, Memories and Opinions," is ample proof that he was as good a critic as he was a clinician or an investigator.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

CXLIX.—CHRONIC NASAL DISCHARGE AND SINUSITIS IN CHILDREN.[1]

Foreign Bodies in the Nose.

OCCASIONALLY a child pushes a foreign body into his nose without the parents' knowledge. If the object is hard or metallic—e.g., a bead or button—no trouble may arise until years later when a calculus has formed around it which causes obstruction, ulceration, and sanious discharge. On the other hand, when the object is soft or absorbent—e.g., sponge, paper, or wool—it soon becomes a foul purulent focus. The pus trickles from the affected nasal passage, excoriating the nostril, and the breath is fœtid. Headache, aural and other symptoms may also be present. Inspection generally reveals the foreign body, but if it is covered with pus, concealed by the swollen mucous membrane, or offers no resistance to the probe its detection may prove difficult. Under such circumstances, or if the child is young or intractable, a few whiffs of adrenalin solution (1 in 10,000) should be sprayed into the affected nasal passage and a general anæsthetic given. If chloroform is chosen no adrenalin should be applied after narcosis is commenced. A thorough rhinoscopic examination is thus possible, and with a probe search can be made beneath the inferior turbinate and in the upper parts of the nose. The body having been located should be extracted by means of nasal forceps, a hook, or suitably bent probe. All manipulations should be carried out as gently as possible in order to keep the field free of blood.

Chronic Rhinitis.

This term comprises: (1) Affections of the nose, in which the lining membrane has undergone chronic inflammatory changes. These are commonly caused by colds, influenza, the exanthemata, &c., irregularities of the nasal chambers, sinusitis, and adenoids. (2) The groups of nasal signs—the chief of which is hypersecretion—manifested by certain general diseases—e.g., early tuberculosis, intestinal toxæmia, nephritis, &c.

As a rule, when the intranasal changes are slight or absent the discharge is serous or mucous, and when pronounced, muco-purulent. A serous or seromucous discharge is an early sign of simple chronic rhinitis. At this stage of the disease the inferior turbinates swell unduly, causing partial nasal obstruction and secrete excessively, thus giving rise to snuffling and running nose. Colds are readily contracted and the discharge temporarily becomes muco-purulent. In the course of time the congested inferior turbinates undergo hypertrophy. Obstruction and muco-purulent discharge are then constant and the inferior turbinates, even after the application of cocaine, are flabby, especially along their lower edges and at both ends.

Chronic rhinitis is often associated with adenoids and tonsils. When these are removed before the stage of turbinal hypertrophy is reached, cure of the nasal catarrh generally follows. On the other hand, if permanent enlargement of the inferior turbinates has taken place, and is left untreated, the removal of the tonsils and adenoids will not free the child of its nasal symptoms. The frequency of these enlargements has so impressed some rhinologists that the recommendation has been made to reduce the inferior turbinates in every patient operated on for tonsils and adenoids. This is an over-estimate: nevertheless, inquiry should be made in all cases of adenoids as to symptoms of excessive swelling of the inferior turbinates—e.g., pronounced variations at short intervals in the patency of the nose, stuffing in the morning or in a warm room, which passes off on going out of doors, and blocking of one or other side of the nose from time to time. If nasal obstruction and hypersecretion occur independently of adenoids, the parents should be cautioned as to the harmful effects of overheated and close rooms, too little exercise, and too much food. The sending of a city-bred child to the country or of a boy to a preparatory school often dispels all nasal symptoms.

Intermittent obstruction due to turbinal congestion may be benefited, at least temporarily, by a camphor-menthol spray or ointment. A chronic discharge of mucus or muco-pus may be diminished or checked by a nasal wash. For this purpose a warm solution of bicarbonate of soda or common salt (1 drachm of either to one pint of tepid water) is effective. Elaborate formulas made up as powders, tablets, or solutions for the preparation of nasal washes may be found in the lists of manufacturing chemists, but it is doubtful whether these possess specific virtues. Their beneficial action probably is chiefly mechanical. The main requisite in a wash is that it does not irritate the nasal mucous membrane, particularly the olfactory epithelium, and so lead to blunting or loss of the sense of smell. Astringents such as alum and zinc salts are banned on this account.

When the discharge persists or recurs on contracting a slight cold, operative measures may be necessary. The shrivelling of the swollen inferior turbinates by the application of fused chromic acid or the galvano-cautery may suffice. If hypertrophy is established it may be reduced by scissors and snare. This should be done sparingly so that the turbinates may not be undersized when the nose is fully developed. The resection of a deviated septum should be postponed until the patient is at least 17 years of age.

One of the most intractable nasal discharges is that following scarlet fever; it is largely purulent. The inferior turbinates are not enlarged and their lining membrane is not thickened. Nasal washes are only of temporary assistance; mild cauterisation with solutions of chromic acid (10–50 per cent.) afford most benefit. Frequently the antra and several of the other accessory sinuses contribute to the discharge and demand treatment both on this account and because of the recurrent infections—e.g., pneumonia—to which they give rise. When a vasomotor disturbance exists in addition to the turbinal congestion, sneezing may be a pronounced symptom. The obstruction, rhinorrhœa, and sneezing are then usually paroxysmal in character—they set in suddenly, are severe while they last, and cease abruptly. In such cases protein sensitisation and nervous exhaustion must be investigated. When the former can be excluded benefit is most likely obtainable from a course of arsenic.

Some children suffer from a watery nasal discharge which may excoriate the nostrils and upper lip. No turbinal swelling or other intranasal abnormal condition is found. The patients are usually of poor physique and backward; they feel the cold readily,

[1] An article by Dr. Brown Kelly on Chronic Nasal Discharge in Infants appeared in THE LANCET last week.

suffer from chilblains, and sometimes from enuresis. Thyroid extract and calcium preparations are indicated in such cases. A unilateral watery discharge is usually due to unequal patency of the nasal passages, especially from deviation of the septum. The discharge comes from the wider fossa when out of doors on a cold day. The application of the cautery or escharotics to the inferior turbinate on this side, unless it is much hypertrophied, is useless or even harmful, because a considerable amount of the discharge is not secreted by the turbinate, but is due to condensation of the moisture in the expired air. The proper treatment is to equalise the patency of the two sides, but when this involves the correction of the deviated septum operation must be postponed, unless the circumstances are exceptional, until the patient is fully grown.

Sinusitis.

Anatomical investigations, post-mortem examinations, and clinical experience all go to prove that the accessory sinuses of the nose, even in early infancy, may be the seat of inflammatory and suppurative processes. The infection causing these comes oftenest from tonsils and adenoids, acute colds, measles, scarlet fever, diphtheria, and pneumonia. The commonest symptoms are nasal discharge, obstruction, and cough. Occasionally a severe local disturbance with orbital, intracranial, or other complications arises. In some cases the sinusitis is unaccompanied by local symptoms, but acting as a septic focus causes frequently recurring colds in the head, arthritis, nephritis, laryngitis, pulmonary affections, &c. Dean recommends that if, after the removal of tonsils and adenoids, the usual improvement is not obtained, the child continuing listless, pale, with poor appetite, &c., and if, apart from the respiratory tract, the systemic condition is satisfactory, toxæmia should be suspected and search made for a septic focus in the nose or its accessory sinuses.

When the accessory cavities in infants and young children are under suspicion, radiographs should be taken in order to determine which sinuses are present, and their size. Unfortunately, this method in the young is not helpful in diagnosing disease, owing to the pictures of the cavities being ill-defined. The source of a purulent discharge may be discovered by inspection of the nasal fossæ, but oftener no pus can be seen. The pharyngoscope sometimes proves a useful aid. Exploratory sounding, aspirating, and washing may be employed when the sinuses are sufficiently developed. The ethmoidal cells and antrum are of chief clinical importance in the young, the frontal sinus of least. Usually several sinuses on the same side are involved.

The first step in treatment is the removal of the tonsils and adenoids. The improved ventilation which results is followed by the cessation of the sinus discharge in the majority of young patients. Nasal washes and instillations—e.g., argyrol 10 per cent.—should be used to reduce the swelling of the nasal lining membrane and so facilitate drainage of the sinuses. Outdoor life in a warm climate has a beneficial effect. Skillern has found vaccines of greater service in this class of sinus disease than in any other. The ethmoidal cells, frontal sinus, and antrum have been opened and drained in patients even under 3 years of age, but excepting in the case of the antrum such operations are rarely called for. When the patient is over 8 years the antrum can be reached from the inferior meatus and intranasal treatment carried out as in adults. Reference to a radiograph will usually show that this method is not applicable in younger children owing to the floor of the antrum being still too high in relation to the attachment of the inferior turbinate and that attempts to enter the cavity will endanger the rudimentary teeth. For the latter reason the canine fossa route also is not available.

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Special Articles.

GENERAL MEDICAL COUNCIL.

PRESIDENT'S ADDRESS.

THE winter session of the General Medical Council was opened on Nov. 24th, Sir DONALD MACALISTER presiding.

The PRESIDENT began by paying a tribute to the late Queen Alexandra, and expressed the wish of the Council that on a suitable occasion an assurance of the Council's respectful sympathy and deep regret should be conveyed to Their Majesties. Referring to the retirement, after 15 years' service, of Sir Isambard Owen, the President said that few men in the medical profession in this generation had done so much constructive work of an abiding kind in settling the framework and directing the policy of modern universities. His successor was Prof. Edward Fawcett, Dean of the Bristol Faculty of Medicine, whose distinction and experience made him a welcome member of the Council. The session would mainly be devoted to the hearing of charges against registered practitioners, which were brought before the Council as, in the words of Chief Justice Cockburn, "the tribunal to whom the legislature has left the decision, as being the best judges in the matter."

The Functions of the Council.

"Apart from cases of conviction in the criminal courts," continued the President, "the charges to be investigated allege conduct, which in the words of the Act constituting the Council is 'infamous conduct in a professional respect.' These words are sometimes misinterpreted and misapplied by persons ignorant of their history, sometimes even by advocates practising before this tribunal. It is therefore desirable in the common interest that, from time to time, their legal definition should be recalled. The legal definition was not framed by the Council, it was laid down for the direction of the Council by the Supreme Court, and it was prepared by Lord Justice Lopes, Lord Justice Davey, and Lord Esher, Master of the Rolls, in consultation. It is this :—

> If a medical man in the pursuit of his profession has done something with regard to it which will be reasonably regarded as disgraceful or dishonourable by his professional brethren of good repute and competency, then it is open to the General Medical Council, if that is shown, to say that he has been guilty of infamous conduct in a professional respect.

The Master of the Rolls added further :—

> The question is not merely whether what the medical man has done would be an infamous thing for any one else but a medical man to do. He might do an infamous thing which would be infamous in any one else, but if it is not done in a professional respect, it does not come within Section 29 [of the Act]. Yet, if in relation to his profession—that is, either with regard to his patients or to his brethren—he does that which may fairly be considered 'infamous conduct in a professional respect,' then I think it is within the Section.

"Within the jurisdiction defined by the Statute, according to the procedure laid down by the Lords Justices when giving judgment in certain leading cases, and in accordance with the definition of the technical term 'infamous conduct' furnished by the same authority, the Council performs its statutory duty as a 'domestic forum.' If swayed by fear, favour, or clamour the Council fails to perform any duty vested in it by law for the protection of the public, the Medical Acts themselves provide that the public shall not go unprotected. The Privy Council may issue its directions to the General Council to make good the default, and failing compliance, 'may exercise any power or do any act or thing vested in or authorised to be done by the General Council.' In other words, the Medical Council is a public department, with judicial functions defined by Statute and by the Courts, working under the supervision of the Privy Council, and subject to supersession by

the Privy Council if it defaults. It is not vested with any powers or duties for the 'protection' of the medical profession, other than those implied in the preamble to the Medical Act, 1858—namely, 'That persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners.' For that purpose, which is obviously a purpose of public utility, the Register was set up. The Council's duty to the public is simply to ensure that no one who is not legally qualified by adequate professional training and testing shall get on to the Register, and that no one, who by his conduct has forfeited his claim to be entrusted with the status of a legally qualified practitioner, shall remain on it.

Privileges of Qualified Practitioners.

"The legal privileges of the qualified practitioner of medicine and surgery, as compared with the unqualified, are few. He has no monopoly of practice in either branch, such as the law confers on dentists and midwives in their specialties. The 'privileges' are rather trusts than advantages. Thus only the qualified can legally grant a valid medical certificate of illness or injury, or of death, or legally prescribe a dangerous drug for a patient. In many cases the attestation of a qualified practitioner is legally equivalent to that of a magistrate or a clergyman. These 'privileges' are clearly based on the assumption that members of a learned and honourable profession may be trusted to deal honourably. Whoever, therefore, abuses that trust by misusing the privileges his status confers, or by covertly enabling others for private gain to evade their legal disabilities, is chargeable with misconduct 'in a professional respect,' and makes himself liable to the penalty of removal from the Register. As the law stands, he is then as free to practise as if he had not been registered, and the public is as free to employ him, if they think fit. But the Council, as the guardians of the Register, have neither the power nor the responsibility of controlling his conduct thereafter. His status is that of an unqualified practitioner, and he is outside the Council's jurisdiction. . . .

"There are indications that, both within and without the profession, misunderstandings and confusions exist regarding the Council's functions and limitations. We are, for example, frequently confounded with voluntary organisations and societies of medical men, constituted for scientific and professional purposes, and subserving these purposes with eminent efficiency. These bodies are not, however, charged by statute with our duties and powers, nor we with theirs. We have no professional interest to serve other than the efficient performance of the specific duties laid upon us by the law in furtherance of the public welfare. . . .

Reciprocity.

"As regards Ireland, I have only to say that the Act of the Free State passed in February, 1925, which made the Medical Acts operative in Southern Ireland for one year, has been working smoothly so far as this office is concerned. We have had no official intimation from the Free State Government or from the Privy Council that the Act will be renewed next February. Unofficial communications from members of the Irish Branch Council, and others, indicate that indefinite renewal is improbable, and that conferences on the question are in progress between the Government of the Free State and a Committee representative of the Irish medical profession. Until the legislative proposals of the Government in Dublin for the future regulation of medical practice in Southern Ireland are known, it would be inexpedient for this Council to discuss the potential reactions of such legislation on medical education and registration in Great Britain and Northern Ireland. The Free State is autonomous within its own territory, and we must await the decision of its own Government and Parliament.

"The agreement for medical reciprocity with Italy," continued the President, "had been signed by Signor Mussolini and the British Ambassador, as plenipotentiaries, on May 21st, 1925. Certain difficulties of an administrative kind, which related chiefly to the documents to be furnished by British practitioners desirous of practising in Italy, had been satisfactorily overcome, and the cordial understanding regarding medical reciprocity, which subsisted between Italy and this country from 1910 until the promulgation of the recent Italian law on the subject, had been completely restored.

"The position taken up by the Province of Saskatchewan, by which it, in effect, denied to British practitioners registered here the privileges granted in this country to provincial licentiates, had been the subject of negotiation, and action by the Privy Council in regard to the discontinuance of the unreciprocated privilege of Saskatchewan at present remained in abeyance, in order that every opportunity should be afforded for reconsideration of the anomalous position created by Saskatchewan legislation."

[After referring to the appointment of Col. R. A. Needham as a visitor to Calcutta University and to the fact that the recognition accorded to the degrees of the University of the Punjab were to be continued for another year under the same conditions as before, the President continued as follows]:—

Revision of the British Pharmacopœia.

"The Pharmacopœia Committee is now in a position to proceed with its preparations for the revision of the British Pharmacopœia, 1914, which it has for some time been contemplating. Two recent events have cleared the way. The first is the passing of the Therapeutic Substances Act, 1925, by which Government machinery is provided, in association with the International Commission of the League of Nations, for fixing standards, &c., in relation to preparations requiring biological methods of testing. The second is the issue of the report of the International Conference on Potent Drugs, held at Brussels in September. At this Conference the Council was represented by Sir Nestor Tirard, who will report to the Pharmacopœia Committee its proceedings and conclusions. If the latter are accepted, with or without reservations, by the British Government, this acceptance will necessarily involve modifications, some of them important and far-reaching, in the text of the Pharmacopœia. . . . As the Pharmacopœia has by the nature of the case to serve the purposes of all the parts of the Empire in which it is current, it has to include within its scope a much larger number of drugs and preparations than would be deemed necessary for any one part. A given preparation may be thought obsolete or useless here, and yet be much in demand elsewhere. Any drug, in fact, which is (1) in current use over any considerable area, and (2) requires for the safety of the public that it should be exactly defined, in respect of source, preparation, standard of purity, &c., has a claim to admission. The modern freedom of international communication further makes it expedient that, in different countries, the same or equivalent names, especially in the case of potent drugs, shall mean preparations of equivalent strength and composition. In so far as this end can be attained by international agreement, the assimilation makes for public health and safety. All these considerations have to be kept in mind by the Pharmacopœia Committee; and it hopes, with the assistance which it has invited from authorities at home and overseas, and with the coöperation of its expert Committees of Reference, in the next issue to 'afford to the members of the medical profession and to those engaged in the preparation of medicines throughout the British Empire one uniform standard and guide, whereby the nature and composition of substances to be used in medicine may be ascertained and determined.'"

At the conclusion of the presidential address a vote of thanks to Sir Donald MacAlister, proposed by Dr. J. A. MACDONALD and seconded by Sir NORMAN WALKER, was passed by the Council, which then proceeded to the discussion of reports by the Dental Board and the Dental Education Committee and to the consideration of penal cases.

IMPERIAL CANCER RESEARCH FUND.

THE annual report of this Fund was adopted at a meeting of the General Committee held at 8, Queen-square on Nov. 19th, the Duke of Bedford presiding. In introducing the report, Sir Humphry Rolleston, Chairman of the Executive Committee, summarised the account given by the Director, Dr. J. A. Murray, F.R.S., of the work published from the laboratory during the period under review; this extends to 16 months since it has been decided in future to hold the annual meeting in November rather than in July. Among the 11 papers communicated to general and special journals attention was drawn to one by Dr. W. Cramer on the influence of innervation on the experimental production of skin cancer by tar,[1] and one by Dr. G. M. Findlay on the production of cancer by a single application of tar.[2] Dr. Cramer deprived a skin area in a number of mice of the nerve-supply and then painted it twice weekly until cancer supervened. This only occurred after a longer course of tarring than was necessary in normal animals, and, therefore, absence of nerve-supply certainly does not predispose to the genesis of cancer as has been suggested. The nerves grow again into the denervated area, so that the experiment does not give an absolute answer to the question, whether, if renewal of the nerve-supply could be prevented, cancer would not be produced at all.

Dr. Findlay's experiments were devised to determine if it is possible to reproduce in animals the remarkable sequence reported in the human subject from time to time, in which an accidental tar burn has been followed after a short interval by the appearance of typical progressive carcinoma at the point of injury. For this purpose a large number of mice received a single application of hot tar on a small area of the back. A slight swelling and reddening of the skin followed but soon subsided. It was not till the lapse of a year that any further change was observed, and then three mice showed typical cancer of the skin in the site of the application. This experimental result is important in that it shows that general intoxication with tar, which has been invoked by many workers as an important factor in the causation of tar cancer is, to say the least, not essential. Dr. Findlay is also continuing his research into the action of manganese salts, especially as regards the more delayed effects, but has not published any further report in the year under review.

The work under the Atholstan Grant for research is being carried on with great diligence by Dr. A. M. Begg. His investigations on the Rous fowl sarcoma and the infective lymphosarcoma of the dog have inevitably taken on a new orientation since the publication of the work of Dr. W. E. Gye, of the Medical Research Council. Dr. B. R. G. Russell took a keen interest in this work, and since his lamented death Dr. Begg has had the advantage of close association with Dr. Gye. This informal collaboration has been a source of great satisfaction to the Executive Committee. Dr. Begg's investigations are progressing satisfactorily and it is hoped will soon be ready for publication. The important work of Dr. Gye and Mr. Barnard, in addition to the many new lines of inquiry it opens up, calls for the most careful repetition with as many different kinds of tumours as possible. This is now occupying much of the time and energy of the scientific staff.

The Duke of Bedford made sympathetic reference to the loss entailed by the deaths of Dr. Sidney Martin, F.R.S., and of Dr. B. R. G. Russell, for 17 years a member of the scientific staff. As to the report of the hon. treasurer, Sir George Makins, he pointed out that the expenditure had exceeded the fixed income of the Fund—that is, the income derived from investments—by £1765. Subscriptions and legacies had made good that adverse balance, but to be compelled to rely on subscriptions and legacies for carrying on the work of the Fund was always unsatisfactory. He called attention to the list in the Director's report of workers in different parts of the world to whom material has been supplied from the laboratories of the Fund. The ability of the Fund to assist in the investigation of cancer in other laboratories, and the willingness of the staff to do so seemed a most practical way of making collaboration in research really effective, especially as it did not encroach in any way on the freedom of the workers. But this service was often a very laborious one, took up a great deal of the time of the workers, and consequently entailed a considerable addition in working expenses. But it was an increase in expenditure which was a legitimate source of satisfaction inasmuch as it means furthering research throughout the Empire. It was satisfactory to learn that the Stroud Laboratory (at Mill Hill) had been completed, that full opportunity could now be given to carrying out research under Lord Atholstan's gift, and that papers relating to the subject of this research might shortly be expected.

Sir Thomas Barlow, Bart., was nominated for re-election by the Royal Colleges of Physicians and Surgeons as a member of the Executive Committee, and Prof. William Bulloch, F.R.S., and Prof. A. E. Boycott, F.R.S., were re-elected members of the same Committee.

[1] Brit. Jour. Exp. Path., 1925, vi., 71.
[2] THE LANCET, 1925, i., 714.

THE GENEVA OPIUM CONFERENCES AND THE HAGUE CONVENTION.

AN epitome of the work accomplished at the two prolonged Opium Conferences at Geneva has already appeared in THE LANCET,[1] and full official records [2] of the proceedings and a special Foreign Office report [3] have now been issued. It will be remembered that the first of the two conferences purported to deal only with the suppression of opium-smoking (Chapter II. of The Hague Convention), while the second conference was concerned with the abuse of morphia, cocaine, and other drugs of addiction (Chapter III. of The Hague Convention). Again and again in the course of the debates it was manifest that this artificial dissection of The Hague Convention and the reference of its chapters to two different conferences had no logical justification, and indeed caused considerable confusion leading to the regretable withdrawal of the United States delegation, followed by that of China. This unfortunate dichotomy occasioned lengthy and somewhat pedantic discussions as to the competence of one conference to encroach on the reference to the other, and to the unpleasant suggestion that the first conference (which included only representatives of countries concerned with "prepared" or smoking opium) was in fact "a prepared opium bloc" whose members were seeking to release themselves from their obligation under The Hague Convention (Article 6) to bring about the effective suppression of "prepared opium." The American delegation contended for the limitation of the production of opium so as to preclude the use of it or its products for other than medical and scientific purposes. This general principle had been endorsed by the Advisory Committee of the League of Nations on the traffic in opium as being the basis of The Hague Convention of 1912, and the Fourth Assembly of the League had requested the Council of the League to give effect to this principle and to summon a conference for that purpose. It is true that the delegate for India made reservation as to opium-eating as practised in that Dependency not being regarded as illegitimate, and this reservation occasioned considerable difficulty in relation not only to production of opium in India but also to the invasion of sovereign rights by international engagements.

[1] THE LANCET, 1925, i., 878.
[2] League of Nations. Records of the Second Opium Conference (Geneva), Vol. I. and II. (C.760, M.260, 1924, xi.). London: Constable and Co., Ltd. Vol. I., 14s. 6d.; Vol. II., 9s.
[3] H.M. Stationery Office. Cmd. 2461.

The attempt to discriminate between opium-eating as harmless or even beneficent, opium-smoking as a "social vice," and addiction to morphia or its derivatives, has not received scientific or pharmacological justification; while the finding of the Joint Health and Opium Subcommittee of the League of Nations, "that the medical use should be considered the only legitimate use," probably represents the best and informed opinion. When Lord Cecil appeared on the scene as first British delegate on Jan. 19th, 1925, he used all his forensic efforts to separate the work of the two conferences, urging that "opium-smoking had nothing whatever to do with the question of drug addiction." Yet he admitted that "unless growth and production are controlled it will be very difficult to control the use of drugs," and again he said, "it is quite true that a good deal of Indian opium is exported for the purpose of smoking." Much of this Indian-grown opium goes to Crown colonies for smoking purposes, and Sir Malcolm Delevingne in his report to the Foreign Office, says:—

"The fact that a very considerable proportion of the revenues of certain of the Crown colonies is drawn from the traffic in opium-smoking, which is a criminal offence in the self-governing parts of the British Empire and which His Majesty's Government is internationally bound to suppress, lends colour to this allegation. . . . It is doubtful whether, even among the neutral delegations who were not prepared to support the United States proposal, that feeling has been dissipated. It is certain that the United States held it strongly. It is a point of which more will undoubtedly be heard."

At times the fate of the two Geneva conferences was pronounced to be "critical." An attempt to remove the "deadlock" by reference to a joint delegation or commission of the two bodies led to an inconclusive result, and Lord Cecil was constrained to admit that it would very likely have been better not to have had two conferences but one. The final protocols and convention elaborated by the two conferences have already been published and criticised. The suppression of opium-smoking, envisaged by Chapter II. of The Hague Convention, is to take place within 15 years from a date, to be determined by a League of Nations' Commission, when smuggling of opium from producing countries shall have ceased to be a serious obstacle to the enforcement of restrictive measures. A group of opium-producing countries, of which China was not one, agreed to take such measures within five years. A new convention made some additions to The Hague Convention, e.g., the inclusion of coca leaves and Indian hemp, empowered the exclusion of certain preparations, and established a Permanent Central Board to receive information, to compile statistics, to watch international trade, to ask for explanations to publish reports thereon, and communicate them to the Council. All these provisions are dependent on the ratification of the convention (the period for signature closed on Sept. 30th) by ten Powers, including seven who are accorded representation on the Central Board, of which two must be members of the Council of the League.

Some who have reviewed the work of the Geneva conferences find consolation in thinking that an advance has been made even though, as Mr. Zahle, the able President of the second conference, admitted, the attempt to limit production to medical purposes was not successful, and on the definite suppression of opium-smoking no agreement was reached. Mr. J. P. Gavit, who attended every session of the conferences, concludes [4] that "the agreement of the first conference represents no progress worth discussing, and the new drug convention adopted by the second is a thing of printed paper with the odds heavily against its ever being anything else." Prof. W. W. Willoughby, who acted as technical expert to the Chinese delegation, considers [5] that "the initial mistake" was providing for two conferences instead of one, and he holds that "little substantial result is to be expected" from the protocols arrived at. Other writers, including Sir William Collins,[6] and Prof. Perrot,[7] from the French point of view, have also commented on the results. In a pamphlet entitled "Public Health Aspects of the Narcotic Problem," which has reached us from China, Dr. Wu Lien Teh, who speaks with first-hand knowledge of the Far East and was one of the delegates of China to the first Hague Conference, laments the conclusion of the Geneva Conference which made suppression of opium-smoking contingent upon the success of efforts against smuggling. He disputes the alleged virtue of opium against plague, malaria, and tuberculosis, or the necessity of opium-smoking for the Chinese or opium-eating for the natives of India. He alleges that morphia has been and is smuggled into China by the ton, much of which is derived from European countries. It is to be regretted that the legislative results of The Hague Convention in Great Britain in the shape of the Dangerous Drugs Acts, and in the United States in the shape of similar statutes, cannot be given wider and international application, for no one disputes that the production of opium, morphia, cocaine, and other "habit-forming" drugs is grotesquely in excess of any conceivable medical or scientific requirement, and that the surplus output is prostituted to purposes of vice and crime, and to the degradation and demoralisation of the pliant victims of addiction to these dangerous drugs.

[4] Opium. By John Palmer Gavit. Messrs. Routledge.
[5] Opium as an International Problem. Prof. W. W. Willoughby. The Johns Hopkins Press.
[6] Contemporary Review, August, 1925.
[7] Revue Scientifique, July, 1925.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Condition of School Buildings in the Irish Free State.

Mr. T. Johnson, leader of the Labour Party in the Dail, recently asked the Minister of Local Government to give some definite statement of his intention with regard to putting the school buildings into habitable condition. The Minister, in reply, said that the management of the school was responsible for upkeep; the schools were not State schools, but State-aided schools. It was evidently not possible, without changing that system, to impose by the authority of the State a system of local maintenance, whatever might be done to encourage it.

The Minister's answer shows for the first time in history any official appreciation of the responsibility of the State for the sanitary condition of the schools. It has long been recognised that many of the school buildings in all parts of Ireland were unsuitable and insanitary and likely to cause disease among the children crowded into them. The fact that the local manager was legally responsible for the condition of the school premises rendered the central education authority slow to interfere. Indeed, a former chief official of primary education in Ireland, when a demand was made on him by a committee of persons interested in the public health that his department should exercise some control over the sanitary condition of the schools, ridiculed the suggestion, and declared that he and his department were concerned only with the minds of the children and not at all with their bodies.

Enforcement of Vaccination.

For some months past the Department of Local Government and Public Health of the Irish Free State has been endeavouring by means of persuasion to induce the Health Board of Co. Wexford to enforce the laws concerning vaccination. These exertions seem to have been useless, and the Department has at length been compelled to adopt stronger measures. The Health Board was notified last week that the Minister had issued instructions to the Chief State Solicitor to take proceedings by way of mandamus to compel the Board to carry out its legal obligations. The Minister adds that the names of the members who had voted against the enforcing of the law had been furnished to the State Solicitor in order that

they might be named as special defendants and that costs might be recovered from them personally. The letter of the Department was marked "Read." The question of compulsory vaccination was also raised in the Dail last week, when, in reply to a question, the Minister said that he did not intend to introduce legislation to abolish compulsory vaccination, but that he proposed to enforce the existing law.

False Economy.

The authorities of two asylums in the Free State propose to save money by measures which are likely to interfere seriously with efficiency. At the Grangegorman Mental Hospital proposals of economy put forward by a subcommittee were adopted. Among these proposals were a 10 per cent. reduction of the salaries of all employees, and reductions n the yearly increments and long service pay. It seems that a proposal was also made to lengthen the hours of duty of attendants and nurses, but the subcommittee did not accept this. The present working week consists of 56 hours. It is, of course, doubtful how far the Committee of Management has power to alter existing rates of pay, which must, in some cases at least, be matters of contract. The mere proposal, however, is bound to give rise to discontent. In Mullingar Mental Hospital an even more dangerous experiment is to be tried whereby not only the salaries of employees but the dietary of the patients would be curtailed. It is to be hoped that the Department of Local Government will refuse to sanction a dietary strongly condemned by the medical officer, who is primarily responsible for the health of the patients.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Foreign Patients in the Hospitals.

THE chiefs of the Paris hospitals have been struck by the increasing number of aliens whom they attend as patients in the wards. In this connexion Dr. P. E. Weil quotes statistics from the Hôpital Tenon to show that in a period of six months (the last quarter of 1924 and the first quarter of 1925) there received treatment, in medical and surgical wards together, 8321 French people, as compared with 537 aliens, respectively 93·6 and 6·4 per cent. The points of inq iry were the length of time these foreign patients had been in France, their state of health previous to their arrival in the country, the work they had done since their arrival, whether they were suffering from temporary or chronic illnesses, their family responsibilities, and finally their social status. 33 per cent. suffered from curable complaints, 66 per cent. were affected with conditions which more or less seriously diminished their earning powers, and many became a charge on the Assistance Publique. Almost all the foreign patients had been in France for several months, some for several years. There were many cases of old-standing tuberculosis, and many patients had been infected long before their arrival in France. Tuberculosis and chronic bronchitis are of frequent occurrence among natives of Tunis and Morocco, who do not readily become acclimatis d in France. In three cases syphilis was found to be of very old standing, but its visceral manifestations were so extensive as to render the patients useless for work. Of the total of foreigners, two-thirds were single, but one-third were married with families. Thus the number of aliens under treatment in the Paris hospitals is considerable, and as many have chronic diseases which render them non-productive to the State they become a burden on the community. Further, a certain proportion of these patients ar carriers of infection, particularly of pulmonary tuberculosis. There is, therefore, some need of measures to control immigration and ensure the possession of a certain "fund of health" by those who enter France. To this end the Academy of Medicine has nominated a commission which will give full consideration to the question and outline suitable measures for reform.

Serum Therapy for Poisoning by Mushrooms.

Dr. Dujarrie de la Rivière has been for several years conducting researches on animals experimentally poisoned with non-edible mushrooms of the genus Amanita (*A. phalloides, verna, virosa, citrina*) to test the efficacy of the serum of horses immunised by progressively increased doses of the extracts of such fungi. This serum, which he has named "sérum antiphallinique," and which has given encouraging results on the experimental animals, has recently been tried out in man. The effects of the serum were sufficiently satisfactory to justify further trials being made, first because at present there is no adequate therapeusis of fungal poisoning, and second y because it appears that the use of the serum is not attended with any risk. Treatment should be begun as early as possible after ingestion of the poisonous mushroom and should be administered by the intramuscular route. The exhibition of the "sérum antiphallinique" does not interfere in any way with the employment of the usual therapeutic measures, such as cardiac tonics. It would be of advantage if this serum was available at all treatment centres and particularly in the hospitals to enable further tests to be made, where doctors might obtain it when necessary.

Tuberculosis in France.

In France tuberculosis was a grave menace before the war, and the war only increased the dangers of its spread through female labour, insufficient feeding, increased exposure, and abnormal expenditure of bodily energy. The intensive campaign against this disease, initiated by the Rockefeller Foundation, has been continued with excellent results, according to the report of the National Committee against Tuberculosis. In 72 of the French Départements 530 dispensaries are now in active operation. Since the campaign was opened consultations have numbered about 495,000 per annum, the sputum examinations 81,000, and the number of patients placed in conditions favouring good treatment 28,000. The mortality from tuberculosis, which was rising in 1916 and 1917, declined from 1918 to 1920, falling from 278 to 185 per 100,000. Since 1920 no State money has been available for maintaining the statistical records of tuberculosis in France. The *Matin* assigns this unfortunate condition of things chiefly to rivalry between Government bureaus. It appears that the task of keeping the tuberculosis records was transferred from the general statistical bureau to the Ministry of Hygiene, which failed to receive a corresponding budgetary increase.

MEDICINE AND THE LAW.

Workmen's Compensation: Epithelioma of the Scrotum in a Cotton-Spinner.

MEDICINE and the law are probably in agreement over a decision of the county court judge at Oldham in respect of a spinner who had suffered from epithelioma of the scrotum, an occupational disease on which interesting observations have been recorded by Dr. Alexander Scott and Dr. E. L. Kennaway amongst others.[1] From the account published in the *Oldham Evening Chronicle* it appears that the employers did not dispute that the workman acquired the disease through the nature of his work as a cotton mule spinner. He had undergone an operation which the employers contended had been entirely successful. The point at issue between the parties was whether he could be expected to go back to his former employment or not. If not, then he would sink from the wage-level of a skilled workman to that of an unskilled workman and compensation would have to be assessed on the basis of the consequent difference in his earnings. Medical evidence for the applicant expressed the opinion that the fact of his having had the disease indicated that he was predisposed to the action of the mineral oils in that particular kind of employment

[1] THE LANCET, 1925, i., 932–3.

and that therefore it could not safely be said that cancer would not return. This view was ultimately admitted by the medical witnesses called on behalf of the other side. As soon as this point was conceded, there was an end of the case. For the employers it was stated that other men with a similar history had returned to their old work without recurrence of the disease. A doctor testified that the applicant had been certified last April to have sufficiently recovered to be fit for work, and that on recent re-examination he was found to be a sound and healthy man so far as the operation was concerned. The learned judge pressed this witness to know if any medical expert would stake his professional reputation on the non-recurrence of the disease. Naturally no one was prepared to go so far. The judicial attitude is worth noting as a guide for future cases of this kind.

His Honour: Do you think he is a person predisposed to this disease?

Dr. Carr (called by the respondents): I don't think I quite agree with those words.

His Honour: Then how is it that of all these people who work on these mules he should get it? Why should he be singled out? By providence or what?

Dr. Carr (after consideration): I think you must say he is predisposed to it.

His Honour: Knowing a man is predisposed to a disease, would you recommend him to go back to the place and occupation where he got the disease?

Dr. Carr: No.

This was a fair and candid answer, and it meant that the employers could carry their case no further. The learned judge, who, it must be remembered, does not sit regularly in a town like Oldham without acquiring considerable experience in cases of industrial and occupational disease, assessed the applicant's present earning capacity at 38*s.* per week and awarded 6*s.* 11*d.* per week compensation. The principle of the decision seems to be well established, and it is difficult to see how it could be reviewed upon appeal.

The Services.

ROYAL ARMY MEDICAL CORPS.

Maj. E. M. Pennefather to be Lt.-Col., Capt. W. P. Croker to be Maj. to complete estabt.

Capt. G. O. F. Alley is granted the temp. rank of Maj. whilst empld. as a Dep. Asst. Dir. of Hygiene and Pathology.

SUPPLEMENTARY RESERVE OF OFFICERS.

Maj. H. B. Walker, late temp. Maj., R.A.M.C., to be Capt.

TERRITORIAL ARMY.

Capt. G. W. B. Shaw, R.A.M.C., to be Divl. Adjt., 44th (Home Counties) Livn. T. A., vice Capt. S. D. Reid, R.A.M.C., who vacates the appt.

Capt. H. A. Sandiford, R.A.M.C., to be Divl. Adjt., 49th (West Riding) Divn., T.A., vice Capt. C. Popham, R.A.M.C., who vacates the appt.

General List: Lt. Horace Smith Ward (late M.G. Corps) to be Lt.

Sanitary Companies: Lt. G. W. Wright to be Capt.

TERRITORIAL ARMY RESERVE OF OFFICERS.

Capt. J. C. Robb (supernumerary for serv. with the Belfast University Contgt., O.T.C.) from the Active List, to be Capt.

ROYAL AIR FORCE.

The undermentioned are granted short service commissions as Flying Officers, for three years on the active list: G. M. Anderson, B. L. Edwards, and W. D. McKeown.

Flying Officer R. W. White is promoted to the rank of Flight Lt.

INDIA AND THE INDIAN MEDICAL SERVICES.

Lt. C. Hudson to be Col.

Des Raj Nayar to be temp. Lt.

The King has approved the grant of a temporary commission to Harbans Singh.

His Majesty has also approved the relinquishment of their temporary commissions by Capt. Priya Nath Lahiri, who is permitted to retain the rank of Capt.; Capt. Ramesh Chandra Basu, who is permitted to retain the rank of Capt.; Lt. Mir Abdul Basir, who is permitted to retain the rank of Lt.; and Lieut. Fakhar-ud-Din.

Capt. M. Moosa Khan has been appointed Superintendent of the Central Jail, Cannanore, vice Maj. J. C. Bharucha, who reverts to the Madras Civil Medical Department; Lt.-Col. A. W. Overbeck-Wright, on return from leave, has been reposted as Superintendent of the Mental Hospital, Agra. On return from leave, Capt. J. H. Smith has been reposted to charge of the Mandalay Central Jail in relief of Maj. J. Findlay, who has been appointed Superintendent, Insein Central Jail at Mandalay; Capt. A. J. De Souza will act as Civil Surgeon, Cochin.

Revised Rates of Furlough Pay in India for Regular Executive Officers of the Indian Medical Service in Military Employ.

The furlough pay in India of regular executive officers of the I.M.S., while on leave in India, other than privilege leave, will be at the monthly rates given below, to which full overseas pay will be added, when admissible.

Lieutenants	Rs. 375
Captains—	
During first three years' service as captain ..	500
With more than three years' service as captain	600
With more than six years' service as captain	700
Majors—	
During first three years' service as Major. ..	750
With more than three years' service as major ..	900
With more than six years' service as major ..	1050
Lieut.-Colonels—	
Until completion of 23 years' total service ..	1200
During twenty-fourth and twenty-fifth years of service	1300
After completion of 25 years' service	1400
When selected for increased pay..	1550

These revised rates of pay will have effect from Jan. 1st, 1926.

WEST AFRICAN MEDICAL STAFF.

The following appointments are announced: Dr. M. W. Fraser, medical officer, Gold Coast, to be a Senior Medical Officer in Nigeria in succession to the late Dr. J. A. Beamish; Dr. S. Goodbrand, medical officer, Gold Coast, to be a Senior Medical Officer in Nigeria to fill the vacancy caused by promotion of Dr. J. M. Pollard, to be an Assistant Director of the Medical Service in that Colony; and Dr. J. E. Moffatt, medical officer, Gold Coast, to be a Senior Medical Officer in that Colony in succession to Dr. R. O. White who has retired.

Surg. Comdr. H. E. Yeo White, M.V.O., R.N., has been appointed, on the occasion of the visit of H.R.H. the Prince of Wales to Africa and South America, an officer of the Civil Division of the Most Excellent Order of the British Empire.

DEATHS IN THE SERVICES.

Colonel John Lloyd Thomas Jones, I.M.S., retd., brother of Sir Robert Armstrong-Jones, died at his residence in London on Nov. 12th, aged 62. The fourth son of the late Rev. Thomas Jones, of Eisteddfa, Criccieth, he was a student at St. Bartholomew's Hospital and graduated in medicine at the University of Durham in 1885, in which year he also obtained the M.R.C.S. Eng. Two years later he entered the I.M.S., became Captain in 1888, Major in 1899, and Lieut.-Colonel in 1907. In India he first acted in medical charge of the 3rd Beloochistan Regiment at Mhow, later performed similar duties with the 23rd Bombay Light Infantry, and afterwards with the 16th Bombay Infantry; respectively at Karachi, Malegaon, Seetabuldee, and Kamptee. For some time he was in civil charge at Ratragiri and Karwar, when he was again transferred to military duties, serving with the 7th Bombay Lancers in Quetta, and with the 14th Bombay Infantry at Cutch-Bhuj. He afterwards acted as civil surgeon at Kaira, Broach, and Aden. In 1897 he was appointed on famine duty, serving as deputy sanitary commissioner and special plague officer at Poona. By his tact and special knowledge he overcame the native prejudices against segregation, and for these services received the special thanks of the Government of India. In 1899, after leave in England, his services were transferred to the Finance Department of the Government of India and he was appointed Deputy Assay Master to H.M.'s mint in Calcutta, and in 1908 he was transferred to the mint at Bombay as Assay Master. He served at Calcutta and Bombay until his retirement in 1918, when his continuous and devoted services to the British and native officers were recognised by a presentation of gold and silver plate. Colonel Lloyd Jones was a Fellow of the Geological Society, of the Institute of Chemistry, and of the Chemical Society of London, and a member of the Institution of Mining and Metallurgy. He was a member of the Order of St. John of Jerusalem, and during his residence in Bombay served as one of the justices of the peace in that city. A keen horseman and a good judge of horses, he excelled in polo and was well known in Bombay.

Public Health Services.

SCHOOL MEDICAL SERVICE.

THE following are figures for 1924 :—

Name of district.	No. on roll.	Average attendance.	Routine inspections.	No. examined in "code" groups.	Special and re-inspections.	Percentage found on routine examination to require treatment.
Liverpool.	Not stated.	Not stated.	39,098	—	78,986	19·7
Carlisle ..	8,024	7,129	—	2,544	1,516	33·3
Hastings .	6,751*	6,142*	2,163†	—	8,024	18·4
Tunbridge Wells ..	Not stated.	Not stated.	208	701	1,475	20·5

* These are the figures for last quarter.
† In addition 60 other reinspections.

Liverpool.

In his introduction Dr. A. A. Mussen, medical officer of health and school medical officer, mentions four directions in which he looks for further progress—namely: (1) The provision of more open-air education for delicate children, of whom there are a large number in Liverpool. (2) The extension of the scheme for dental treatment, as out of 89 public elementary schools in the city placed on the list for treatment it was only possible to deal with 62. The number of children examined showed, however, considerable increase, being nearly twice as many as in 1921, and the number of parents accepting treatment showed a marked increase. (3) Increased facilities for dealing with the question of uncleanliness. On this subject Dr. Mussen points out that infestation with vermin is in the majority of cases a family condition, and he shows that a satisfactory scheme for dealing with the problem on a large scale involved: improvement in the housing and domestic facilities; the enlightenment of the public and the setting of a higher standard; increased public facilities for cleansing—e.g., the use of large spray baths. (4) His fourth desideratum is the reopening of a class for stammering children which was discontinued during the war. In general, the organisation for inspections and treatment seems quite satisfactory; for example, we note there are six special schools for mentally defective and physically defective children, and there are two classes for children of defective vision. There is an interesting note on 57 children suffering from the after-effects of encephalitis lethargica, and Dr. Mussen shows how these may take the form of paralysis of Parkinsonian type in a few, of mental defect in a few others, but that in others (the great majority) the essential feature is character change. We agree with Dr. Mussen that it would be inadvisable to certify these children either as mentally defective or as lunatics, and that the right method is to certify them as physically defective, but to deal with them apart from the ordinary physically defective child.

Carlisle.

The report of Dr. Joseph Beard is short but full of statistical tables. It may be doubted whether sufficient attention is attracted by these tables; short comments might make them more interesting to both lay and medical minds. There is a noticeable decrease in the figures for defective vision, and Dr. Beard suggests that this may be a result of changes in the curriculum. There are no schools for the physically or the mentally defective. The report deals with open-air education at some length and is very instructive. The "Newtown delicate class" presents some interesting features. There is a fair sprinkling of tuberculous cases in the class, and 45 children received injections of tuberculin B.E. out of 85 children dealt with in the class. The items o cost for this class are illuminating, the average total per child being only 8*d.* per day.

Hastings.

Dr. G. R. Bruce, medical officer of health and school medical officer, publishes his school and general public health reports together, and it is evident that the coördination now in force is very complete. For example, the borough is divided into four districts, each with a health visitor, the scope of whose activities is very large and who also does the school work, so that, as Dr. Bruce says, "the nurse with continuity of office may follow the children from birth to the end of their school days, while the long-suffering mother has one visitor the less." Each nurse has also an infant welfare centre in her district, while each half of the town is served by an antenatal centre. There is cordial cöoperation with the many activities of the voluntary associations which Hastings is fortunate in possessing. Dr. Bruce is responsible not only to the Education Committee for the mentally defective school-children, but also to the Mental Deficiency Act Committee for other persons. There is a special school for mentally defective children at Hollington doing good work; it is benefited by the recent establishment of an occupation centre for lower grades. There is at present no school for the physically defective. Crippling of severe degree is uncommon in Hastings, thanks to the comparative absence of acute poliomyelitis, rickets, and surgical tuberculosis. There are, however, several mild cases, and the solution is an orthopædic scheme together with the open-air school, which is now being considered by the Education Committee and should soon materialise.

Tunbridge Wells.

Dr. F. C. Linton, medical officer of health and school medical officer, includes school work in his public health report, and deals with it briefly. Coördination is, he states, complete, since he is responsible for child welfare and the care of debilitated children under school age as well as for school-children. He considers that the increased treatment of tonsils and adenoids may be a factor in the reduction of the incidence of infectious disease; a similar opinion has been expressed in other areas. We are sorry to see there are no special schools in the area, though Dr. Linton states that, using the term in a very broad sense, there are 113 physically defective children. Sixteen of these are, however, attending a private and voluntary open-air school provided by the kindness of a lady resident.

TUBERCULOSIS SERVICE.

YEAR by year the county councils and the county boroughs find themselves bearing a larger and larger share of the tuberculosis work of the country, and we note the welcome tendency for reports of tuberculosis officers to become more informing and valuable.

The report of the central tuberculosis officer of the *Lancashire County Council* for the year 1924 gives an extensive survey of the conditions of tuberculosis in the county. Details of death-rates, notifications, radiological investigation, research work, propaganda and education of the public, housing conditions, after-care, new hospitals and dispensaries, are all dealt with at considerable length. One of the most interesting sections of the report is devoted to radiological work in which the value of X ray examination in diagnosis and treatment of tuberculosis is emphasised. X ray installations have now been increased so that there is one dispensary in each area equipped for this purpose, and over 4000 radiological examinations have been made during 1924, in comparison with less than 200 in 1920 when the first installation was made. The radiograms given in the report show that the tuberculosis officers of Lancashire possess a wealth of clinical material of which they make good use. A considerable amount of research work is being done and no less than nine special methods of treatment have been investigated. As the central tuberculosis

officer points out, the results of these investigations do not show that any drug or preparation can be regarded as definitely beneficial in the treatment of tuberculosis, yet the time spent by the staff has be n by no means wasted but rather valuable experience has been gained. The report shows that a further decline in deaths from tuberculosis and new cases notified occurred during the year 1924, the death-rate being the lowest so far recorded.

The report for the *City and County of Newcastle-upon-Tyne* shows a definite decrease of the notifications for the year for the first time since the introduction of compulsory notification. The figure for pulmonary tuberculosis in adult females exceeded that for adult males, and is the highest recorded since 1912. The tuberculosis medical officer considers that the adverse economic condition of recent years has been a contributory factor in this result, but suggests that there may be other explanations still to be found. The report also contains a record of institutional treatment at Barrasford sanatorium, where early or moderately advanced cases of pulmonary tuberculosis are treated; at the sanatorium pavilions of the City Hospital, where more advanced and emergency cases are dealt with; and at Stannington sanatorium, where tuberculous children are cared for. Statistical tables are given showing the previous occupation of patients, the average number of beds occupied, and the number of patient days, results of treatment, and other important details.

In the report on tuberculosis for 1924 from the *Public Health and Housing Department for Birmingham* figures are given showing the mortality from tuberculosis in 1923 of eight other large towns in Great Britain with which to compare the Birmingham figures. The mortality-rate per 1000 of all forms of tuberculosis in these towns shows that Birmingham occupies a very favourable position. The report emphasises the advantage which Birmingham possesses in having sufficient beds for the work. Interesting statistics are given showing the working capacity of patients when first examined, newly notified cases, old cases, "suspects" and "contacts," and a section showing results of dental treatment. The services of a part-time dental surgeon are utilised and the treatment consists mainly of extractions, fillings, and scalings. It is very encouraging to find this important aspect of the tuberculosis problem so carefully dealt with. The report also devotes a section to the new light treatment department which has been installed.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED NOV. 14TH, 1925.

Notifications.—The following cases of infectious disease were notified during the week:—Small-pox, 73; scarlet fever, 2262; diphtheria, 1052; enteric fever, 67; pneumonia, 889; puerperal fever, 37; cerebro-spinal fever, 4; acute poliomyelitis, 6; acute polio-encephalitis, 1; encephalitis lethargica, 43; continued fever, 1; dysentery, 2; ophthalmia neonatorum, 93. There were no cases of cholera, plague, or typhus notified during the week.

Deaths.—In the aggregate of great towns, including London, there were 6 deaths from enteric fever (none in London), 34 from measles, 5 from scarlet fever, 29 from whooping-cough, 28 from diphtheria, and 44 from influenza. In London itself there were 8 deaths from diphtheria and 17 deaths of infants under 2 years of age from diarrhœa and enteritis (a substantial fall from previous weeks).

LACK OF SMALL WARDS.—The Minister of Health has drawn the attention of the guardians to the lack of small wards in Lambeth Poor-law Infirmary and to the consequent difficulties of administration. Stress is laid on the value, for instance, of small wards in the treatment of puerperal fever. At Lambeth such cases have to be treated in large wards, and the Minister points out that the advantages of treatment in small ones apply to other diseases besides that mentioned, and suggests that the guardians should consider the adaptation of an existing block at the institution for such purposes.

Correspondence.

"Audi alteram partem."

INOCULATION AGAINST THE COMMON COLD.

To the Editor of THE LANCET.

SIR,—Dr. A. I. Simey's address on the prophylaxis of the common cold and febrile catarrhs in your last issue will be of great interest to all who are responsible for the care of children at boarding schools. Dr. Simey understates rather than overstates the importance of this matter as, in addition to all those who come under the care of the school medical officer for catarrhal infections, there are always a considerable number who suffer from colds without pyrexia, and who fail to report to the house matron or medical officer lest they be put off games. These minor cases, although less serious to themselves, are fruitful sources for spreading the infection.

Dr. Simey's bold suggestion concerning prophylactic inoculation in boarding schools deserves the consideration and support of school medical officers. The fact that inoculation with certain specific bacteria is advocated does not mean that these bacteria must be accepted as the primary cause of the disease. It is conceivable, and perhaps even probable, that the primary cause, if unattended by secondary infections, would be negligible. With regard to the details of his suggested experiment, I think that it is important that vaccines should be made from recently isolated cultures from acute infections, and that the vaccines should be of recent date—say not more than four months old.

With regard to the organisms which should be included in the vaccine, there will be some difference of opinion, but if several large schools are carrying out such an experiment in conjunction with different laboratories, valuable statistical evidence may be obtained on this point. Dr. Simey's suggestion of inoculating during the summer and Christmas holidays would, I think, be unsatisfactory. In the summer holidays no large numbers of recent cultures would be available, and few parents would be inclined to go to the necessary trouble during the summer months when they and their family are probably away from home and out of reach of any doctor they know. Similarly, it would not be popular to disturb the round of Christmas-time festivities. The whole matter would more simply and efficiently be carried out by the school medical officer.

I would suggest, therefore, that two inoculations should be given during the first half of October, and again two in the second half of January. This would enable the vaccine to be made up from the first batch of catarrhal infections which usually occur towards the end of September, and also allows for the probability that artificial immunity to the bacteria in question is in many cases of comparatively short duration.

I am, Sir, yours faithfully,

London Hospital, E., Nov. 23rd. G. T. WESTERN.

NASAL LAVAGE AND ACUTE MIDDLE-EAR INFLAMMATION.

To the Editor of THE LANCET.

SIR,—Acute middle-ear inflammation and its complications, due to nasal lavage in some form or another in healthy and unhealthy noses, has become so frequent that the subject requires thorough examination and ventilation. The usual reasons given for nasal lavage when there is nothing whatever the matter are that it keeps the nose clean and clear, and prevents infection. The Ministry of Health must accept part of the responsibility, for, in one of the recent influenza epidemics, they advised it as a preventive measure. It does not seem to be realised that the lining membrane of the nose is a very delicate thing and possesses the functions of warming, moistening, and purifying the air passing

over it; in these functions the ciliæ, mucous glands, and blood-supply play a large part and the application of any unnatural material must hinder them in their work—at first overstimulating and then temporarily paralysing them. Patients often say, "But you should see what a large amount of stuff comes away after doing it," thinking they are getting rid of a collected nasty discharge, and not realising that the nasal mucous membrane, by pouring out the extra normal mucus, is protesting as vigorously as it can against the outrage inflicted upon it. It is quite common for repeated attacks of acute middle-ear inflammation to result from some of the injected solution passing up the Eustachian tube. It should be generally known that the healthy nose is hindered in its work by the application of anything unnatural and the danger to hearing and life is a very real one.

Nasal lavage is used in unhealthy noses whatever is the matter when, in the majority of cases, surgical interference is the proper treatment. A placebo is sometimes a useful thing, but nasal lavage is a dangerous one. It is common to treat an ordinary cold by irrigation, usually with salt and water, and it is then especially likely to cause middle-ear inflammation. I have lately had three such cases in private practice in 48 hours, one of which just escaped with life after an extensive mastoid operation. In each one the solution was felt to enter the ear immediately before the onset of pain. A cold is an infective inflammation of the nasal lining membrane and such treatment is not only a danger to the ears, but violates the fundamental rules for the treatment of inflammation—namely, rest and heat. I am constantly hearing of this method of treatment for colds by the matrons in our schools. I wish to protest most strongly against it, but am afraid that nothing will stop it unless parents order that nasal lavage in any form should never be used by their children before they enter a school and if, in spite of this, it is done and evil results, an action for damages is brought against those responsible.

I am, Sir, yours faithfully,

ARTHUR H. CHEATLE.

Harley-street, W., Nov. 23rd, 1925.

POST-GRADUATE EDUCATION.

To the Editor of THE LANCET.

SIR,—At the dinner of the Royal Society of Medicine on Thursday last the Minister of Health referred to the establishment of a post-graduate school in London which would attract general practitioners from the country and towns to learn from the leaders of the medical profession. I am in agreement as to the advantage such a school would possess for those fortunate enough to attend it. I cannot help feeling, however, what an advantage it would be if the leaders of the profession who have spent so much time dealing with the end-results of disease in our hospitals could in their turn go to the country practitioner and to the welfare medical officers of our big factories for a time and study the very first symptoms of diseases which, if unchecked, will ultimately bring their victims into the out-patient department, and finally into the in-patient department of the great hospitals. The worker suffers from these early symptoms for quite a time while still carrying on his daily task, and only goes off duty when he has used up the reserves which enabled him to carry on in spite of his disability.

If this form of interchange were associated with post-graduate teaching, the medical profession would benefit, and the public to an even greater extent. The present system of hospital staffing is not the one best calculated to assist in the progress of medical knowledge. The young physician takes on the care of out-patients, and when he is older and more experienced he takes on the care of beds in the wards which are filled with the end-results of disease. If the situations were reversed and the senior men had charge of the out-patient department they might prevent many cases passing on to the in-patient stage of diseases, and the number of beds which needed their experienced care because of the rare diseases would not be great. No very special knowledge is required to deal with cases of advanced disease which occupy so large a proportion of medical beds. In time the junior staff would be promoted to the out-patient department.

I am, Sir, yours faithfully,

BRUCE BRUCE-PORTER.

Grosvenor-street, W., Nov. 23rd, 1925.

MYOMECTOMY AS THE TREATMENT OF ELECTION FOR UTERINE FIBROIDS.

To the Editor of THE LANCET.

SIR,—I suppose the majority of gynæcological surgeons are in agreement with Mr. Victor Bonney in his teaching that the uterus during the child-bearing period should be conserved if possible, and that it is possible in many cases at least to conserve the organ when the seat of fibroid formation, to the extent indeed of rendering future pregnancy possible in some, he has shown. But that myomectomy is of service and should be done after the climacteric is another question. The uterus at this time is presumably of no further use, is liable to serious disease, and the value of conserving it, to say the least, is questionable. The incidence of malignant disease of the uterus in the general population may be small, and not much greater or not greater in women with than in those without fibroids, but the danger is always there. When we think of the mortality of Wertheim's operation, even in expert hands, and the number of recurrences after this operation, it seems to me that the conservation of the uterus, the seat of fibroids in post-climacteric life, is carrying the art of surgery too far. If prophylactic pan-hysterectomy for slight and suspicious lesions of the cervix in such period of life is justifiable, as I think it is, much more reasonable, it seems to me, is the removal of the whole uterus when the seat of fibroids in such period. In this respect, the slightly greater risk of pan-hysterectomy compared with sub-total comes up for consideration. With the advance of pelvic surgery it can hardly be believed that the mortality and morbidity of the former operation is not greatly less at present than it was fifteen years ago. The position requires reviewing. Personally, I think the sub-total operation to-day is too often performed.

But however gynæcologists may view this subsidiary question, few, I think, will sympathise with Mr. Bonney's teaching or accept the reason he gives for conserving the uterus, the seat of fibroids, in some elderly women. In his series of 120 cases of all ages, he had three deaths. Two of these deaths occurred in "elderly women" in whom the "object of conserving the uterus was . . . to ventrofix it and make it act as an artificial ligament to hold up a prolapsed vaginal vault." Mr. Victor Bonney knows, or should know, as well as anyone else, that the uterus cannot be made to serve the purpose of a ligament to hold up the vaginal vault. Many instances have been cited of the uterus having been used in this way, but with the return to active life the same result has always occurred. If the "prolapse" is not prevented by other means, with resumption of general activity, the uterus elongates or the part of the abdominal wall to which its fundus is attached is depressed, the prolapse returning and the state of the patient becoming worse than before. The uterus as a suspensory agent is of no service in the prevention of pudendal hernia. It can only be of service if it can be used to play the part of a pessary (or an intra-corporeal truss), as in the interposition operation—in which, however, if malignant disease be feared, the endometrium can be removed.

It is unfortunate that Mr. Bonney should thus weaken his otherwise excellent argument.

I am, Sir, yours faithfully,

R. H. PARAMORE, F.R.C.S. Eng.

Rugby, Nov. 21st, 1925.

THE TROPHOBLASTIC HYPOTHESIS OF CANCER.

To the Editor of THE LANCET.

SIR,—Prof. Blair Bell's adoption without acknowledgment of the unfruitful trophoblastic (or chorionic) hypothesis of the nature of cancer, first put forward more than 20 years ago (THE LANCET, 1902, i., 1758) by my former teacher, the late Dr. John Beard, cannot be allowed to pass without remark from me. From that paper, in which the theory was outlined, the penultimate sentence may be quoted:—

> If such a chorion the representative more or less complete of the asexual generation, when robbed of its embryo or when it fails to form such, can—and this is established—give origin to a malignant carcinomatous tumour the nature of cancer is clear.

The patronising attitude towards other workers which pervades Dr. Bell's whole lecture comes ill from one who, it is charitable to assume, is himself ignorant of the recent literature of the subject.

I am, Sir, yours faithfully,

J. A. MURRAY.

Imperial Cancer Research Fund, 8, Queen-square, W.C. Nov. 25th, 1925.

TELLING THE TRUTH.

To the Editor of THE LANCET.

SIR,—Doctors, in the course of their professional duties, have to tell many falsehoods, and now and again a discussion arises as to the ethics of professional lying, or rather, lying by a professional healer. It is not often, however, that such a witty defence of the professional lie is made as that published by Dr. Boutarel in a recent number of *Paris Médical*. After recalling the famous controversy, celebrated by Pascal in *Les Provinciales*, between the Jansenists and the Jesuits on the subject of restrictions of thought, Dr. Boutarel reminds us that in actual fact we all practise such restrictions. You borrow 50*s*. from a friend, saying: "I will pay you back," but adding, in your own mind, "if I have any money." The Jansenists would call this hypocrisy, the Jesuits diplomacy. Or again a dealer in antiques lays his hand on a piece of furniture, declaring solemnly: "I guarantee that this is old," but he carefully avoids touching the bronze corner-pieces which have just been added. "Disgracefully underhand!" cry the Jansenists. "Merely skilful," protest the casuists.

In the medical profession such restrictions are everyday affairs. Morphine, administered to a hopeless case, is termed "serum." The pretty wife of a faithless husband is assured that her husband has become infected through drinking out of a dirty glass. A bullet wound in the head is called a cerebral hæmorrhage, and so the pious falsehoods go on. Some doctors try to solve the insoluble by refusing a diagnosis in certain cases, but this is no real solution. *Qui ne dit mot consent* and to withhold a diagnosis is equivalent in some cases to making an accusation. With regard to professional confidences, there is only one attitude to take, thinks Dr. Boutarel, and that is for the doctor to keep sacred all secrets confided to him, even if questioned in a court of law. Should a medico-legal expert be called and should his evidence prove the correct diagnosis, and thus show up the doctor in charge of the case, the latter ought to be exonerated from any blame. Life without falsehoods would be insupportable; we lie daily through politeness, through laziness, through self-interest, so why should we not lie occasionally in the interests of a third person?

It seems to me that many besides Dr. Boutarel have found that a few lies, in the shape of half-truths, will sometimes go a long way towards effecting a cure.

I am, Sir, yours faithfully,

Nov. 22nd, 1925. CROIX ROUGE.

Obituary.

SIR ROBERT CHARLES BROWN, F.R.C.P. LOND., F.R.C.S. ENG.

Sir Robert Charles Brown, a well-known physician of Preston, Lancs, died at his residence in Winckley-square, Preston, on Nov. 23rd at the age of 89. He was a son of Alderman Robert Brown, F.R.C.S., and was born in Preston, where he received his early education. He pursued his medical studies at King's College Hospital, London, and in Edinburgh and Dublin, qualifying L.S.A. and M.R.C.S. Eng. in 1858. Three years later he obtained the M.B. Lond., and in 1862 was admitted F.R.C.S. Eng. by examination. In 1908 he was admitted a Fellow of the Royal College of Physicians. Throughout his professional career he was closely associated with the Preston Infirmary since its opening in 1870, as medical officer in his younger days and as a generous benefactor to its material needs in later years, besides holding the post of consulting medical officer. It was in recognition of his services to that and other institutions that he was made an hon. freeman of the borough in 1910. From the first he was closely connected with the work of the Cambridge Committee for the Study of Special Diseases. He promoted it in various ways, by personal effort and enlisting the support of others, by installing a complete X ray apparatus, by providing the most efficient microphotographic microscope obtainable, and, above all, by founding a studentship for pathological research. For these services the University of Cambridge conferred on him the hon. degree of M.A. in May, 1912, and on the following day he formally opened the Research Hospital built on the Hills-road. Sir Robert Brown was three times president of the Lancashire and Cheshire branch of the British Medical Association, and was an esquire of the Order of St. John of Jerusalem. He was knighted in 1919.

JOHN JAMES BLAGDEN, M.R.C.S. ENG.

BY the death of Dr. Blagden, Chester has lost one of its leading surgeons. He studied at St. Bartholomew's Hospital, London, and at Cambridge, graduating B.A. Camb. in 1893, and qualifying M.R.C.S. and L.R.C.P. in 1896. After qualifying he was assistant house surgeon at the Taunton and Somerset Hospital and honorary surgeon at the Tavistock Cottage Hospital. He settled in Chester nearly 30 years ago, where he was assistant honorary surgeon at the Chester Royal Infirmary from 1909 to 1919, when he was elected honorary surgeon to this institution. He retired last May owing to ill-health. During the war he rendered valuable service in orthopædic surgery as surgeon in charge of this department in Chester. He was a past president of the Chester Medical Society and chairman of the Chester Division of the British Medical Association. He leaves a widow and one son, who was recently called to the Bar.

MEMORIAL COTS AT VINCENT-SQUARE HOSPITAL.—Last week Mr. J. Gomer Berry, the chairman, formally accepted more than 20 "memorial cots" which have been given to the Infants Hospital in Vincent-square, Westminster. The Prudential Assurance Co. has given six cots in "The Prudential Ward," together with the installation of the X ray room.

ENLARGEMENT OF LONDONDERRY INFIRMARY.—The Duchess of Abercorn has this week opened the new Poston wing of Londonderry City and County Infirmary. The wing is named after two brothers, the late Robert and John Poston, who provided a large proportion of the cost. It will hold 25 patients, which brings up the total number of beds to 100. Accommodation is also provided for a resident surgeon, two house surgeons, the matron, six sisters, and 19 staff and probationer nurses. The infirmary, which dates from 1789, was last enlarged 20 years ago.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

AT a recent meeting of the Section of Surgery held in the Royal College of Physicians of Ireland, with Mr. R. C. B. MAUNSELL, the President, in the chair, Mr. R. A. STONEY showed a woman of 30 who had suffered from all the clinical symptoms of exophthalmic goitre. In spite of rest in bed, sedatives, and Lugol's solution the pulse-rate, which at first fell, increased and the patient lost weight. Immediately before operation the basal metabolism was increased by 46 per cent. The patient was given rectal ether and the right lobe isthmus and lower half of the left lobe were removed. Three weeks after operation the basal metabolism had fallen to 27 per cent. below normal, the pulse had fallen and was steady. Tremors had almost entirely disappeared, exophthalmos had decreased, weight had increased, and the patient stated that she felt much better and was now eating and sleeping well.

Mr. H. STOKES said that he had operated on a good many cases of patients with exophthalmic goitre, and the results on the whole had been distinctly good. He had found that iodine acted very well; recently he had a patient whom he had put on iodine, and her pulse-rate had come down, but immediately he stopped the iodine her pulse went up again. He did not do lobectomy, but he took out a large portion of the centre of each lobe, after doing a preliminary ligature of the upper lobe. He had done about four or five such operations a year for the last few years. He had altogether operated on about 35 patients, and only two had died. One, a very bad case, did not recover from the anæsthetic, and the other died from septic pneumonia.

Dr. G. E. NESBITT said that it was sometimes stated that physicians were reluctant to give their patients with exophthalmic goitre over for operation. He did not think this was true, but they wanted more proof that operation was the best method of dealing with these cases. No mention had been made of the treatment by X rays, and he thought that most people if they got exophthalmic goitre would prefer to be treated in that way first. Good results certainly were often obtained by X ray treatment. At present he had a patient in hospital, a girl of 18, who on admission was practically moribund, and for some time it was impossible to do anything for her. When he managed to get her weight it was only 3 st. 8 lb. Later she had a course of X rays, and during this time she put on 9 lb. in weight. He now wondered whether she should have a further course of X rays or whether she should be operated on. She would not have stood an operation before, and he doubted if she would stand one now. He thought that it was very hard to judge how much thyroid should be removed in these cases.

Mr. H. MEADE said that he thought surgeons seldom get patients of exophthalmic goitre handed over to them early enough and so they really did not get a chance with them. If good results were to be obtained by operation it was necessary to operate early.

Mr. L. G. GUNN said that he saw a good many cases of goitre, and he would divide them into two classes, mild cases and really very severe cases. He had operated on 14 severe cases and two had died directly as a result of the operation. Of the other 12, two had shown a definite return of exophthalmic symptoms, one after five years and the other after eight years. He thought that probably he had not taken a sufficient amount of thyroid gland away; but he felt that even after surgery there was likely to be a certain amount of recurrence. A great deal depended on the patients; if a patient had only to do light work, or no work at all, then medical treatment and X rays might be given; but if the patient had to do hard work, then he would advise operation. He had seen a good many cases greatly improved after medical treatment, but very few of these had been fit to go back fairly soon to work, while after operation they were fit to work in quite a short time. Of course, sometimes quite a simple operation was followed by a very severe reaction, and even death.

THE IMPERIAL NURSING SERVICES.

THE name of the late Queen Alexandra is intimately associated with all the official nursing services of the Army, the Navy, and of India.

The committees of *Queen Alexandra's Imperial Military Nursing Service* and of the Territorial Army Nursing Service conjointly make up the *Queen Alexandra's Army Nursing Board*. This Board, formed in 1902, was constituted as follows:—

President: H.M. Queen Alexandra.

Vice-President: The Dowager Countess of Airlie, G.B.E.

Chairman: The Director-General, Army Medical Services.

Two members nominated by the President and holding office for three years.

Two members of the Advisory Board, Army Medical Service, one of whom is a civilian.

Four matrons of large civil hospitals with medical schools.

Matron-in-chief, Q.A.I.M.N.S.

Joint Secretaries: Matron-in-chief, T.A.N.S.; Principal Matron, Q.A.I.M.N.S.

The Board meets twice yearly, and is responsible for advising the Army Council in all matters affecting the Army Nursing Services. The Q.A.I.M.N.S. Committee meets monthly to deal with applications of candidates for the service, promotions, retirements, and reports of hospitals. The Board has not merely to advise in regard to the nursing of the soldier in peace, but has also to initiate schemes for the rapid and extensive expansion of the service on the outbreak of war. To meet these requirements a reserve of nurses has been formed. The T.A.N.S. Committee meets twice a year on the same day as the Board.

By Order in Council of March 6th, 1902, authority was obtained to designate the staff of nursing sisters in naval hospitals by the title of *Queen Alexandra's Royal Naval Nursing Service*. The present staff comprises three head sisters, eight superintending sisters, and 61 nursing sisters. Members serve at R.N. Hospitals at Haslar, Chatham, Plymouth, Portland, and Queensferry; R.N. Sick Quarters at Dartmouth and Shotley; and R.N. Hospitals abroad at Malta and Hong-Kong.

The *Queen Alexandra's Military Nursing Service for India* consists of a chief lady superintendent, a number of lady superintendents, and nursing sisters to the number required by the strength of British troops in India. The chief lady superintendent is an administrative official; the other members undertake the nursing of sick and wounded British soldiers, besides instructing the male nursing orderlies in nursing duties and supervising their work. The Nursing Service also supervise the management of the family hospitals, which exist for the care of the families of British officers and soldiers. A proposal is under consideration to amalgamate the Nursing Service for India with the Imperial Military Nursing Service, and to arrange for members of the combined service to proceed to India in the course of their career for a tour of duty with British troops, on the same system as that in force with regard to the Royal Army Medical Corps.

QUEEN ALEXANDRA'S LAST MESSAGE.—The annual meeting of Queen Victoria's Jubilee Institute for Nurses was held at St. James's Palace on Wednesday in last week. The Duke of Portland, who presided, read a message which he had received from Queen Alexandra wishing prosperity to the Institute, and expressing the hope that the financial outlook might continue to improve, and her thanks to all the workers for "the good cause which is so near to my heart." Mr. Neville Chamberlain, the Minister of Health, delivered an address in which he said that much of the money and work spent on medical services would be thrown away if it were not for the work of the district nurses.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

New Public Health Bill.

ON Monday, Nov. 23rd, the House considered the Rating and Valuation Bill as amended in Standing Committee, and Mr. BARKER moved a new clause to exempt underground sewers from rating. Mr. NEVILLE CHAMBERLAIN said that he had much sympathy with the proposal to exempt from rating not only sewers, but also such things as pipes which conveyed water from a reservoir to a town many miles distant and which passed through the areas of different local authorities. While he could give no guarantee as to future legislation, he hoped next year it might be possible to introduce a Bill to amend the Public Health Acts and if so that might be a suitable opportunity to deal with the matter. The clause was negatived.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 18TH.

Approved Societies and Dental Benefit.

Mr. FORREST asked the Minister of Health what were the types of benefits now being given by the approved societies, and especially how many of them provided dental benefit; and whether he was in a position to make specific recommendations to the societies as to the directions in which benefits should be given.—Mr. N. CHAMBERLAIN replied: The additional benefits which are now being provided by approved societies out of surpluses disclosed on a valuation include, in addition to increases of the standard rates of sickness, disablement and maternity benefits, dental benefit, ophthalmic benefit, treatment in convalescent homes, the provision of medical and surgical appliances, and payments to hospitals and for nursing. Dental benefit has already been adopted in England by 794 societies and 2662 branches, and these numbers will no doubt be increased when the whole of the schemes following the second valuation have been formulated. As regards the last part of the question it rests with each society to consider which of the additional benefits are best suited to the needs of its members, but any scheme adopted requires the sanction of the department before it can be brought into operation, and where a society's proposals are thought for any reason to be inappropriate recommendations for amendment are made to the society.

Reduction of Insurance Contributions.

Mr. FORREST asked the Minister of Health whether he was now in a position to make a definite statement as to the intentions of the Government regarding the proposal to reduce contributions under the National Health Insurance Act.—Mr. N. CHAMBERLAIN replied: The answer is in the negative. It will be remembered that a Royal Commission is at present investigating the National Health Insurance scheme.

British Social Hygiene Council.

Major-General Sir JOHN DAVIDSON asked the Minister of Health what was the amount of the grant given to the British Social Hygiene Council and what, if any, stipulations were made as to the manner in which it was expended.—Mr. N. CHAMBERLAIN replied: The amount of the grant paid to date during the current financial year is £5500. The grant is expended on the carrying out of a programme of educational work, the details of which have received the prior approval of my department.

Preventives for Venereal Disease.

Major-General Sir JOHN DAVIDSON asked the Minister of Health whether he was in a position yet to give any reply to the joint deputation of the National Council for Combating Venereal Disease and the Society for the Prevention of Venereal Disease received by him on March 5th, 1925, in relation to the alteration of the law regarding the sale by chemists of preventives for venereal disease.—Mr. N. CHAMBERLAIN replied: I would refer my hon. and gallant friend to the answer which I gave to his question of June 22nd. I am still awaiting a reply to the letter which I addressed to the two societies on May 15th last.

Geneva Opium Convention.

Mr. CAMPBELL asked the Secretary of State for Foreign Affairs which of the powers had ratified the Opium Convention, signed at Geneva on Feb. 19th, 1925.—Mr. CHAMBERLAIN replied: No information has yet been received as to which powers, if any, have ratified the Convention. The period for signature only closed on Sept. 30th last.

Vaccination and Small-pox.

Mr. GROVES asked the Minister of Health if he would give statistics, with such approximate accuracy as the available information permitted, showing the proportion of the population then living which had been vaccinated at public expense in each of the years 1852, 1853, 1854, 1871, 1872, 1882, 1883, 1884, 1902, 1903, 1904, 1922, 1923, and 1924, if figures for that year were available, and the number of deaths from small-pox in each year; and the number of cases of supposed small-pox notified in each year beginning with 1892.—Mr. N. CHAMBERLAIN replied: There are no statistics available showing what proportion of the population living in the years mentioned in the question had been vaccinated at public expense, but I would refer the hon. member to the figures given him on April 7th last as to the percentages of vaccinations to births, and the numbers of deaths from small-pox during each of the years 1872 to 1924. The deaths from small-pox during the years 1852, 1853, 1854 and 1871 numbered 7320, 3151, 2808, and 23,062 respectively. As regards the last part of the question particulars of the numbers of cases of small-pox notified are available only for the years 1911 onward, and the figures (excluding port sanitary cases) are as follows:—

1911	265	1916	135	1921	311
1912	111	1917	6	1922	967
1913	90	1918	51	1923	2477
1914	57	1919	262	1924	3757
1915	78	1920	243		

It should be understood that these figures represent not notifications only. They have not been subjected to the corrections and additions set forth in the small-pox section of the annual reports of the Chief Medical Officer of the Ministry of Health.

Panel Doctors and Medical Certificates.

Mr. WALTER BAKER asked the Minister of Health whether he was aware of the practice of panel doctors to charge for a medical certificate for a patient's private employer, such certificate being additional to that required by the patient's approved society; whether any provision was made under the Health Insurance Act for providing such additional certificate free of charge; and, if not, whether he would take steps to secure that some such provision is made.—Sir KINGSLEY WOOD (Parliamentary Secretary to the Ministry of Health) replied: My right hon. friend is aware that such a charge is sometimes made, though he has no information as to the extent to which the practice prevails. There is no statutory provision for the issue of certificates other than those required for National Health Insurance purposes and the hon. Member's proposal would require legislation.

Registration of Nursing Homes.

Mr. GERALD HURST asked the Minister of Health whether he would now appoint a Committee to inquire into the desirability of legislation for the purpose of registering and supervising nursing homes.—Sir KINGSLEY WOOD replied: In view of the present pressure of work and the difficulty of completing the inquiry before the end of the session it is not proposed to proceed with the appointment of a Select Committee this year, but steps will be taken to set up the Committee at the earliest practicable date next session.

Transference of Pensions Work from Scotland to London.

Dr. SHIELS asked the Minister of Pensions what was the exact nature and extent of the work formerly done in Scotland, and now transferred to the Ministry of Pensions in London; was it intended to carry this process further within any definite period, and would the Scottish Advisory Council be consulted before any such steps are taken in the future.—Mr. THOMAS KENNEDY asked the Minister of Pensions if he was aware of the very strong feeling aroused in Scotland by the intimation that the Scottish Regional Office of the Ministry of Pensions was to be closed, and the work now being done there transferred to London; and if he would concede the request of the Scottish Advisory Council that the decision to transfer the widows and dependants section to London should be delayed pending Parliamentary discussion of this proposal.—Lieut.-Colonel G. F. STANLEY replied: The work transferred from the Ministry's sub-office in Edinburgh to London consisted in the handling of claims of widows and dependants referred from the area offices. The work involved formed only a small section of the work of the Regional Office in Edinburgh, as may be gauged by the fact that it occupied the time of only 22 clerks, or less than one-tenth of the Regional Office staff. The transfer of this small branch of the work, which has now been carried out, was directed by my right hon. friend for technical reasons. My right hon. friend must hold himself free, in the exercise of his responsibility as a minister, to make any change in administrative routine which he is satisfied will make for efficiency of administration consistently with the interests of pensioners. The re-centralisation of the entire work of the Regional Office in Edinburgh is, as

already publicly stated, not in issue at the present moment, though the time is probably not far distant, according to present indications, when the decline in the volume of the Ministry's work will render the retention of a sub-office unjustifiable in Edinburgh, as has already been found to be the case in other parts of the United Kingdom. When, however, the time arrives for a decision to be taken, it is my right hon. friend's intention to give his Scottish Advisory Council an opportunity of expressing their views.

THURSDAY, NOV. 19TH.

Supply of Artificial Limbs.

Mr. GEORGE HARVEY asked the Minister of Pensions if he was aware that the number of contractors to the Ministry for artificial limbs had been recently reduced from 14 to 2, and special concessions made to those favoured 2 firms to the unreasonable detriment of the other 12; and was he prepared to reconsider his decision and meet a deputation from the remaining 12, whose businesses had consequently been necessarily seriously curtailed, if not actually closed down.—Mr. ROBERT MORRISON asked the Minister of Pensions why the number of firms supplying artificial limbs to disabled ex-Service men through the Ministry of Pensions had recently been limited to two.—Major TRYON replied: In consequence of refusal by the firms of limb makers hitherto under contract with the Ministry for the supply of artificial metal legs to continue to renew their contracts, except on terms which would have involved a greatly increased charge on public funds, I appointed a committee of inquiry, presided over by Sir Godfrey Collins, and including Major Cohen and other representatives of disabled officers and men, to investigate the whole position with regard to the supply and repair of this type of limb. Following the committee's report and recommendations, the number of firms with whom contracts were made for the supply and repair of artificial metal legs has been restricted to two. I have also received a deputation representing 10 of the 12 firms of limb makers who no longer hold contracts for the supply and repair of these limbs and have informed them that the matter cannot be reconsidered. The position is that certain firms had formed a combination against the Government, but, thanks to the committee, a cheaper supply of artificial limbs has been obtained.

In reply to further questions Major Tryon said that the limbs supplied were of first-rate quality. The House would wish him to express the debt of ex-Service men and of the country generally to the committee.

Bakers' Dermatitis.

Mr. FORREST asked the Home Secretary whether any legislation was contemplated in connexion with the spread of dermatitis among bakers, in view of the fact that operatives suffering from this disease were at present permitted to go on working with consequent risk to the consuming public.—Sir W. JOYNSON-HICKS replied: No legislation is contemplated, but the question of issuing an order requiring the occupiers to adopt special precautionary measures is now under consideration.

Colonel DAY asked the Minister of Health if he was aware that improvers, such as boric acid, used by bakers to improve bread, resulted in dermatitis; and whether, in view of this danger to public health, he would consider the advisability of making an order prohibiting the use of such improvers by bakers.—Mr. N. CHAMBERLAIN replied: The effect on the health of the consumer of the treatment of flour with "improvers" and other chemical substances is at present being investigated by a departmental committee, and pending their report I could not entertain a proposal to make restrictive regulations. I may add that so far as I am aware boric acid is never added to flour.

Increase in the Population.

Mr. SANDEMAN asked the Minister of Health what was the estimated increase of population in Great Britain since the last Census returns.—Mr. N. CHAMBERLAIN replied: The estimated increase of population in England and Wales from the date of the last Census in 1921 to the middle of 1925 is 1,003,000.

Smoke Abatement.

Sir WALTER DE FRECE asked the Minister of Health whether he proposed to introduce a Bill dealing with smoke abatement; and, if so, whether he could indicate when this would be.—Mr. N. CHAMBERLAIN replied: I hope to introduce a Bill on this subject next session.

The Case of Prince Ahmed.

Lieut.-Commander KENWORTHY asked the Minister of Health whether, when Prince Ahmed Seif-ed-Din escaped from Ticehurst asylum, detectives attached to the special branch of Scotland Yard were sent to France to effect his arrest; if he was aware that the prince had been confined in asylums in England since 1902 and that repeated efforts to have the patient examined by independent specialists had been refused; and whether he would make a statement on the subject, in view of the fact that the prince had established his sanity since leaving this country.—Mr. N. CHAMBERLAIN replied: I would ask the hon. and gallant Member to address the first part of his question to the Home Secretary. As regards the second part, I am informed that Prince Ahmed was confined in an asylum in this country from July, 1900, to September, 1925. During that period he has been frequently seen by medical and legal commissioners of the Board of Control. Within a year of his original detention a special visit was paid to him by a medical commissioner; and a similar visit was paid as recently as July, 1924, when the commissioner was satisfied that the prince was insane and properly detained. In September, 1924, the patient was examined by three independent specialists, two being eminent alienists of this country and one a specialist from Zurich. They also expressed the view that the prince was definitely of unsound mind. A further application for an examination by independent specialists was made to the Board in the same month, but was declined because it was considered that another medical inquisition at such a short interval might be detrimental to the patient's health. In regard to the third part of the question, I have no information relative to the statement that the prince has established his sanity since leaving the country; but I am advised that, judged by the standard of conduct recognised in this country, he was undoubtedly insane at the time of his escape.

Patients in Poor-law Hospitals.

Mr. NAYLOR asked the Minister of Health whether he would consider the advisability of introducing a Bill to remove the anomaly existing under the provisions of Section 46 (1) (*b*) of the Local Government Act, 1894, whereby members of boards of guardians and borough councils were disqualified from office owing to their entering or a member of their family entering a Poor-law hospital, notwithstanding that the full cost of maintenance was paid for the whole period of chargeability.—Mr. N. CHAMBERLAIN replied: I cannot see my way to introduce a Bill for this purpose at the present time.

Instruction in Birth Control.

Mr. BASIL PETO asked the Minister of Health whether he had received requests from electors in London and the provinces asking that advice and instruction on birth control should be given at maternity centres to married women on the recommendation of medical men; and whether these requests included many from medical officers of health and other persons in authority.—Mr. N. CHAMBERLAIN replied: The answer to the first part of the question is in the affirmative. As regards the second part I have no record of having received such a request from any medical officer of health, but a few have been received from magistrates, doctors, teachers, and other responsible persons.

Free Clinics for Cancer Treatment.

Mr. FORREST asked the Minister of Health whether, in connexion with the prevention of cancer, his attention had been drawn to the establishment in America of free clinics whereat all persons with suspicious growths were able to attend, whether he had ascertained if medical opinion in this country was in favour of the inauguration of such centres here; and, if so, whether he could give any estimate of what the cost would be.—Mr. N. CHAMBERLAIN replied: I am aware that certain free clinics have been established in the United States for the purpose indicated by the hon. Member. As regards this country, there are numerous out-patient departments of general hospitals and other medical institutions (specialised for the treatment of cancer or otherwise), at which persons who suspect that they are suffering from the early stages of cancer can receive gratuitous diagnosis, advice and treatment. In July, 1923, the Departmental Committee on Cancer, appointed by one of my predecessors, made certain recommendations as to the way in which local facilities for early diagnosis and treatment of this disease might be improved by local action. These recommendations were embodied in a circular issued by my department to local authorities on August 14th, 1923,[1] and are, I understand, now being followed in several of the larger cities.

Bethnal Green Medical Officer.

Lieut.-Colonel Sir FREDERICK HALL asked the Minister of Health whether, seeing that the Bethnal Green Metropolitan Borough Council recently approved a proposal for the appointment of a medical officer of health at a salary of £800, rising to £900 a year, and that his department intervened and expressed the view that the commencing salary should be not less than £1000, and in view of the recognised need for public economy and the fact that the salary offered by the borough council was considerably more than the income earned by a number of able, highly-trained general practitioners, he would state what were the general principles which had actuated the Ministry in taking

[1] THE LANCET, 1923, ii. p. 479.

this line.—Mr. N. CHAMBERLAIN replied: The salary first proposed by the borough council was considerably below the standard arrived at as appropriate to such an area after lengthy discussions between representatives of the Ministry of Health and of the British Medical Association and Society of Medical Officers of Health, with the assistance of advice from gentlemen of standing in the field of local government. In the circumstances I felt it impossible to approve the proposal of the authority and have sanctioned a temporary appointment.

Treatment of Encephalitis Lethargica.

Captain HUDSON asked the Minister of Pensions how many ex-Service men were now in the Star and Garter Home for Disabled Soldiers and Sailors suffering from encephalitis lethargica; how many were receiving pensions on account of this disease; and how many wives of such men were receiving allowances.—Major G. C. TRYON replied: This institution is not under my control, and I am not therefore in a position to furnish the desired information, except as regards those cases for whose treatment in the institution my department is responsible. Three such cases suffering from the disease referred to are being maintained in the home at the cost of the Ministry. In each case the usual treatment allowances are being paid in lieu of pension.

Contamination of Fish.

Captain FAIRFAX asked the Minister of Health whether, in view of the fact that fish is moister than meat, and, for that reason, more liable to contamination and risk by and from flies and dust, he had considered or would consider applying to fish the provisions of the Public Health (Meat) Regulations, 1924.—Mr. N. CHAMBERLAIN replied: That part of the meat regulations dealing with inspection at the time of slaughter would obviously be inapplicable to fish. The conditions under which fish and other foods are stored or sold are now governed by Section 72 of the Public Health Act, 1925, which applies to fish (amongst other foods) the important provisions of the regulations dealing with the conditions under which meat is stored or sold in shops.

MONDAY, NOV. 23RD.

Indian Medical Service.

Mr. DAVID GRENFELL asked the Under Secretary of State for India whether the recommendations of the Lee Commission with regard to the substitution of the Indian Medical Service by the Civil Medical Service had been given effect to.—Earl WINTERTON replied: The recommendations of the Lee Report as to the constitution of Provincial Civil Medical Services have been accepted in principle, subject to the need for maintaining for army requirements a reserve of medical officers in civil employ, and for providing medical attendance by British doctors for British members of the Services. It has been decided to maintain the Indian Medical Service in substantially its present form to meet army requirements, and the Government of India are now considering how best to adapt the civil branch of the service to the general scheme of medical reorganisation.

Opium Conditions in India.

Mr. CECIL WILSON asked the Under Secretary of State for India whether there was any intention on the part of the Government to have an official inquiry into opium conditions generally in India; and, if so, whether he could give this House any information as to the nature and scope of the inquiry.—Earl WINTERTON replied: About the beginning of this year the Government of India addressed local governments, drawing attention to some prima facie evidence of abuses of opium in various directions, and asked them to examine the question and to consider with the Government of India by what kind of special inquiry or committee the problem should be dealt with if the local governments come to the conclusion that the evidence makes it desirable to review the conclusions of the Royal Commission of 1893. In September last the Government of India stated that they were still awaiting the replies of local governments.

The Government and the Amani Institute.

Mr. RAMSDEN asked the Secretary of State for the Colonies the policy of the Government with regard to the Amani Institute.—Mr. AMERY replied: I am glad to be able to say that the governments of the East African territories are prepared to grant sufficient funds to enable the Institute to be reopened. The necessary capital expenditure in this connexion can be found from the proposed guaranteed loan for which a Bill will in due course be laid before Parliament. H.M. Government are fully alive to the importance of Amani for the future development of East Africa.

Yaws in Kenya Colony.

Mr. HERBERT WILLIAMS asked the Secretary of State for the Colonies the total number of cases of yaws in Kenya Colony last year; and how many of these received adequate medical treatment.—Mr. AMERY replied: 29,402 cases of yaws were treated at Government hospitals and dispensaries in Kenya during the year 1924; and, in addition, 16,125 cases were treated by Government medical officers while on tour in their districts, either at out-dispensaries or otherwise. I fear it is impossible to estimate the number of cases which did not come to the notice of medical officers.

Replying to a supplementary question by Lieut.-Colonel FREMANTLE as to whether the Amani Institute was investigating this disease, Mr. AMERY said the Institute was established for the purpose of research in connexion with plants and agriculture, but he was very anxious to promote research in health questions as well.

Medical Men in Kenya.

Mr. HERBERT WILLIAMS asked the Secretary of State for the Colonies the number of qualified medical men in the public service and in private practice in Kenya Colony.—Mr. AMERY replied: According to a return published on Jan. 21st last, there were 76 registered medical practitioners resident in Kenya, of whom 32 were European Government medical officers.

Machinery Accidents.

Mr. WALTER BAKER asked the Home Secretary whether, having regard to the high total of deaths due to transmission machinery, it was proposed to introduce fresh legislation rendering owners or persons responsible for the machinery liable to imprisonment in the case of avoidable accidents.—Sir W. JOYNSON-HICKS replied: In cases where an accident is due to neglect of the occupier to comply with the requirements of the law, the occupier is liable to a maximum penalty of £100, but I find that this maximum is not often imposed, and I doubt whether a power to sentence to imprisonment would be of much practical use. Successful proceedings for failure to fence transmission machinery have been recently taken in a number of cases and important decisions as to the liability of occupiers have been obtained from the High Court. Special steps have also been taken to instruct occupiers by the issue of a Safety pamphlet on the subject, and I am hopeful that these measures may have the desired effect.

Pensioners and the Spahlinger Treatment.

Mr. VERNON DAVIES asked the Minister of Pensions whether the information available in his department regarding the Spahlinger treatment was yet sufficient to justify him in arranging for the provision of this form of treatment for pensioners suffering from tuberculosis.—Lieut.-Colonel G. F. STANLEY (Parliamentary Secretary to the Ministry of Pensions) replied: No Sir. I would refer the hon. Member to the reply I gave on July 28th last. The matter is one primarily for the Ministry of Health. My right hon. friend understands that the case must still, for the present, be considered "not proven."

Evidence by Former Lunacy Patients.

Sir CHARLES OMAN asked the Minister of Health whether any further evidence from former inmates of asylums was to be taken by the Royal Commission on Lunacy; and whether requests for permission to give such further evidence had been received by that Commission during the last few months and refused.—Mr. N. CHAMBERLAIN replied: I understand that the Royal Commission, having heard oral evidence from 13 former inmates of asylums and considered a large number of written statements, do not propose to take further evidence of this nature. During the last six months eight applications have been received from former inmates desiring to give oral evidence; but the Commissioners have been unable to comply with these requests.

TUESDAY, NOV. 24TH.

Alterations in Pensions Administration.

Mr. ROBINSON asked the Minister of Pensions what were the names and salaries of the regional directors in the Ministry of Pensions; how many, if any, were on part time; how many had received an intimation that their services might at an early date be dispensed with; and whether his department had under consideration such reorganisation of the administration as would involve the closing of all regions by June, 1926, and the centralisation of administrative work in the Ministry headquarters in London.—Lieut.-Colonel C. F. STANLEY replied: On the completion of the recentralisation of the Midlands region on the 5th proximo there will remain only two regions, Northern, with headquarters at Newcastle-on-Tyne, and Scotland, with headquarters at Edinburgh. In the Northern region the duties of regional director have for many months past been combined with those of the Commissioner of Medical Services without increase in emoluments. In the Scotland region the regional director is at present required to give part-time service only and receives a salary of £600 per annum. His services cease at the end of next month, and thereafter the duties will be

combined with those of the Commissioner of Medical Services without increase in that officer's emoluments. Recentralisation is the policy of the present Government, as it was of the last, and arrangements are already in contemplation for closing the headquarters of the Northern region early in 1926. No decision has yet been taken on the question of the recentralisation of the Scotland region, but, as I indicated on Nov. 18th, the time is not far distant, according to present indications, when the decline in the volume of the Ministry's work will render the retention of separate regional headquarters in Edinburgh unjustifiable.

Health of Merchant Seamen.

Mr. BENJAMIN SMITH asked the President of the Board of Trade whether he would arrange for an annual report to be issued regarding the health of merchant seamen, giving a scientific analysis of diseases in the statistics published in the Return of the Shipping Casualties to and Deaths on Vessels Registered in the United Kingdom; give information as to the total number of men serving amongst whom the deaths occurred; and, in view of the apparent absence of medical advisers in the department, would he consider whether the health of seamen was a responsibility which might with advantage be transferred to the Ministry of Health.—Sir P. CUNLIFFE-LISTER replied: I will consider whether the statistics for which the hon. Member now asks can be prepared, but I would call his attention to the replies given him on March 3rd last, of which I am sending him copies.

Tests for Motor Drivers.

Sir FRANK SANDERSON asked the Minister of Transport if he would introduce legislation making the granting of licences to automobile drivers conditional upon their passing a recognised test in driving.—Colonel WILFRID ASHLEY replied: As I have stated on previous occasions, I am disposed to agree with the conclusion arrived at by the Departmental Committee on the Taxation and Regulation of Road Vehicles, as stated in their second interim report, that any advantages which at first sight might appear likely to result from the institution of tests on the lines indicated would be outweighed by the expense, difficulties, and disadvantages inseparable from any such system.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the undermentioned subjects:—

Surgery.—T. M. Beattie, Leeds; N. Cohen, Guy's Hosp.; S. E. Henty, King's Coll. Hosp.; M. Hook, Boston, U.S.A.; B. Horwitz, Guy's Hosp.; J. M. F. Whitby, St. Thomas's Hosp.; and D. Winstanley, Liverpool.

Medicine.—V. G. Crowley, Sydney and St. George's Hosp.; N. C. Ghose, Middlesex Hosp.; B. D. Jain, Charing Cross Hosp.; E. Kessel, Kharkov and Westminster Hosp.; and E. W. D. Long and J. Mindess, London Hosp.

Forensic Medicine.—M. Bannounah, A. M. El-Mishad, and C. L. Froehlich, Guy's Hosp.; M. Hook, Boston, U.S.A.; J. Mindess, London Hosp.; S. R. G. Pimm, Guy's Hosp.; L. A. Rostant, St. Thomas's Hosp.; and F. Widlake, Guy's Hosp.

Midwifery.—C. L. Froehlich, Guy's Hosp.; E. W. Hayward, Cambridge and London Hosp.; S. E. Henty, King's Coll. Hosp.; F. G. Martin, Charing Cross Hosp.; H. A. Sack, Middlesex Hosp.; and F. Widlake, Guy's Hosp.

The Diploma of the Society was granted to the following candidates entitling them to practise medicine, surgery, and midwifery: C. L. Froehlich, M. Hook, F. G. Martin, and D. Winstanley.

UNIVERSITY OF LONDON LECTURES.—A course of five lectures on the Physiological and Pathological Activities and Functions of Bacteria will be given by Dr. F. W. Twort (Superintendent of the Brown Institution) in the Theatre of the Royal College of Surgeons (Lincoln's Inn-fields, W.C.) on Dec. 7th, 8th, 10th, 11th, and 14th, at 4 P.M.—A course of two lectures on the Efficiency of the Heart and its Measurement will be given by Prof. Yandell Henderson (Professor of Applied Physiology in Yale University) in the Physiology Theatre, University College, London (Gower-street, W.C.), on Monday and Tuesday, Nov. 30th and Dec. 1st, at 4.30 P.M. At the first lecture the chair will be taken by Prof. E. H. Starling, F.R.S. Admission to these lectures is free, without ticket.

Charing Cross Hospital Medical School.—The Huxley Lecture on Recent Advances in Science, in their Relation to Practical Medicine, will be delivered by Sir Oliver Lodge, D.Sc., F.R.S., on Thursday, Dec. 3rd, at 3 P.M., in the Out-patients' Hall of the hospital.

UNIVERSITY OF CAMBRIDGE: *Chair of Physiology.*—The election of a successor to the late Prof. J. N. Langley will take place in December. Candidates are requested to communicate with the Vice-Chancellor not later than Dec. 14th.

UNIVERSITY OF MANCHESTER.—The Court of Governors have appointed Mr. Walter Hamilton Moberley, M.A., D.S.O., at present Principal of University College of the South-West of England, at Exeter, to succeed Sir Henry Miers in September next as vice-chancellor.

NATIONAL HEALTH SOCIETY.—Dr. Robert Hutchison will deliver the Lady Priestley Memorial Lecture on Diet in Childhood and Adolescence on Thursday, Dec. 3rd, at 5 P.M., at 90, Buckingham Palace-road, S.W. (the Royal Sanitary Institute), Sir James Crichton-Browne, M.D., F.R.S., in the chair.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—A dramatic entertainment in aid of the Jubilee Endowment Appeal Fund will be given by the staff of the school on Dec. 11th at 8.30 P.M., and Dec. 12th at 3 P.M., and again at 8 P.M., at 8, Hunter-street, London, W.C. Tickets, 5*s.* and 2*s.* 6*d.*, may be obtained from Miss Bond, 8, Hunter-street, London, W.C. 1.

METROPOLITAN ASYLUMS BOARD: DIPLOMA IN PUBLIC HEALTH.—A course of lectures and demonstrations (three months) in hospital administration will be given at the North-Western Hospital, Lawn-road, Hampstead, N.W., by Dr. E. W. Goodall (medical superintendent), on Mondays and Thursdays, at 4.45 P.M., and alternate Saturdays at 10.30 A.M., beginning Thursday, Jan. 7th, 1926.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Sir John Bland-Sutton presided at the annual meeting of the Fellows and Members of this Society held at the College on Nov. 19th, when Dr. L. Haden Guest, M.P., moved the resolution which appeared in THE LANCET of Nov. 14th (p. 1043). It was, he said, inconceivable that in any other body than the College of Surgeons the same resolution should have been passed 36 times without notice being taken of it. All were agreed that the administration of the College had been and was being carried on in an exemplary manner, but the College owed a duty both to its members and to the public. The Council of the College had to deal with the conduct of examinations, the course of study, the choice of subjects, and the approval of schools and hospitals where instruction was given. The income of the College was derived to a large extent from its members, and he associated himself with those who advocated that the controlling body should be brought into closer touch with the general practitioner. Mr. F. Lawson Dodd, L.D.S., seconding the resolution, said that he represented the great unorganised mass of members who would like to have a closer union with the parent body. The result would be to give the College greater authority, a wider sanction, and more influence with the public. Dr. A. Haydon hoped it would be possible shortly to elect five members of the College on the Council, one for London and four for the provinces. Should this privilege not be granted he proposed the foundation of a new College of Surgeons with power to hold examinations and issue diplomas at lower fees than the present College. The resolution was carried with three dissentients. The President stated that the decision did not rest with him, but with the Council which was intending, before sending in the supplementary charter to the Privy Council, to give this matter very earnest consideration.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—On Monday, Nov. 30th, at 5.30 P.M., Mr. Herbert Tilley will lecture on Tuberculosis of the Larynx, in the lecture hall of the Medical Society of London, 11, Chandos-street, W. The lecture is free to all members of the medical profession. On Nov. 30th to Dec. 13th the Infants Hospital will hold a special course during the afternoons only, with the exception of Sunday, when a morning visit will take place to Thavies Inn, Holborn. Lectures and demonstrations will be given by Dr. Eric Pritchard and other members of the staff. Visits will be arranged to the Nursery Training School, Hampstead Garden Suburb, and the Home for Blind Babies, Chorley Wood. For the convenience of the general practitioner whose available time is limited, the Hampstead General Hospital will hold a 4.30 to 6 P.M. course from Dec. 7th to 19th, covering all branches of medicine, surgery, and the special departments. At the Hospital for Diseases of the Skin, Blackfriars, a course in dermatology will take place from Dec. 7th to 19th. Instruction will be given in the out-patient department, and venereal clinics will be held twice weekly. The following are the special courses for January:

Medicine, surgery, and the specialties at the Prince of Wales's General Hospital; cardiology at the National Hospital for Diseases of the Heart; diseases of children at the Queen's Hospital; infectious fevers at the North-Eastern Hospital; neurology at the West End Hospital for Nervous Diseases; and psychological medicine at the Bethlem Royal Hospital. A copy of each syllabus and the Fellowship general course programme will be forwarded on application to the Secretary to the Fellowship of Medicine, 1, Wimpole-street, London, W. 1.

WHITBY'S WAR MEMORIAL HOSPITAL.—Princess Mary on Nov. 18th opened a new cottage hospital at Whitby erected by the townspeople as a war memorial. For the new building—which has seven beds in the women's department, six in the men's ward, and three in the children's ward, besides four small wards with one bed in each—nearly £19,000 was raised to cover the cost of building and equipment. The operating block is the gift of Sir John Harrowing in memory of a son killed in the war.

AIMAI MERWANJI CHAMARBAGWALA FREE OPHTHALMIC HOSPITAL.—The report of this institution for the year 1924 shows that it was started on a small scale in the year 1914 by two Bombay doctors. Its scope was enlarged in 1922 by the generosity of a Parsi gentleman after whose wife it is now named. In 1924 9200 new patients were treated. The number of cases operated on for cataract was 188, for glaucoma 26. The committee of management of this young institution consists of the two senior surgeons and the donor of the extension. It has an honorary staff of four and one house surgeon.

MANCHESTER CANCER COMMITTEE.—The Manchester Cancer Committee has issued an appeal for £20,000 for the investigation into cancer during the next three years. The committee, which was formed at the instigation of the Minister of Health, numbers now 40 members, and consists of officially appointed representatives from the Public Health Committee, the University, the Manchester Royal Infirmary, the Christie Hospital, the Radium Institute, and other large hospitals in the city concerned with the problem of cancer in all its forms. The following scheme of investigation into cancer has been decided upon:—(1) Investigation of the blood and tissue changes in cancer cases by modern methods. (2) The collection of specimens from cancer cases for submission to a histologist for research purposes. (3) The establishment of a regular and complete system of record-keeping of cancer cases in all the city hospitals and in private practice. The occurrence of cancer amongst mule spinners gives the cotton manufacturing districts a special interest in any research work bearing on the investigation of the causes and increasing prevalence of cancer. The approved scheme will necessitate the appointment of full-time research workers and laboratory assistants and the provision of the necessary apparatus and clinical assistance. All money received will be expended entirely on investigations to be carried out in Manchester.

QUEEN MARY'S HOSPITAL FOR THE EAST END, STRATFORD, E.—The twenty-second annual festival dinner of this hospital was held at the Hotel Victoria, Northumberland-avenue, on Nov. 23rd. Prince Henry, President of the hospital, had expressed the wish that the festival should not be postponed on account of the death of Queen Alexandra, and in his absence from the chair Lord Birkenhead presided over a large assembly of some 500 guests. The Chairman in giving the loyal toasts, briefly voiced the sympathy that all felt towards the Royal Family in their bereavement, and later in the evening made an eloquent appeal for funds on behalf of the hospital, for the maintenance of which £50,000 was required annually. Sir Leonard Lyle, chairman of the hospital, in response to Lord Birkenhead, said that there was a deficit of £7389 on the work of the past year, and that in future the expenses of the hospital would exceed the figure for 1924 by £9000 a year. Mr. H. Roper Barrett gave the toast of the honorary medical staff, the nursing staff, the voluntary workers, and officials of the hospital, to which Mr. A. J. Couzens and Major Raphael Jackson, the secretary, responded. In the course of his reply, Major Jackson announced that the sum of £5590 had already been received towards the total of £15,000, for which a special appeal was being made to free the hospital from debt and carry out a number of improvements. Sir Charles Wakefield gave the health of the Chairman of the Appeal Fund, Mr. H. Percy Shepherd, who himself headed the list of donors with a gift of £1000. The toast of the Visitors was given by Mr. W. A. Vernon, hon. treasurer of the hospital, and was acknowledged by the Mayor of West Ham. Sir Ernest Wild, K.C., proposed "The Chairman," to which Lord Birkenhead replied.

THE DEATH OF QUEEN ALEXANDRA.

TRIBUTE OF THE GENERAL MEDICAL COUNCIL.

AT the first sitting of the General Medical Council, the President, Sir Donald MacAlister, paid a tribute to the late Queen Alexandra. The Council, he said, were meeting under the shadow of a national bereavement. "The death of the Queen-Mother Alexandra, revered and beloved by the whole nation, has made us all fellow-mourners with the Royal Family." Members rose in silence in homage to her memory.

LETTER OF CONDOLENCE FROM THE BRITISH MEDICAL ASSOCIATION.

The following letter, dated Nov. 24th, has been sent to Lord Stamfordham signed by the Chairman of Council of the British Medical Association:—

MY LORD,—On behalf of the members of the British Medical Association throughout the Empire I respectfully beg leave to express to His Most Gracious Majesty the King, our Patron, Her Majesty the Queen, and the members of the Royal Family, the Association's heartfelt sympathy and profound sorrow at the death of Queen Alexandra, whose gracious thoughtfulness and unfailing devotion to the relief of suffering have endeared her to the profession. The Association joins with the whole Empire in mourning one so greatly beloved, and in expressing to His Majesty its loyalty and devotion.

I am, your Lordship's most obedient Servant,

(Sgd.) ROBT. A. BOLAM,
Chairman of Council.

Medical Diary.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

Tuesday, Dec. 1st.

ORTHOPÆDICS: at 8.30 P.M.
Discussion:
The Treatment of Fractures of the Forearm, Excluding Fractures of the Olecranon and those of the Lower End of the Radius of the Colles's Type.
Opener:
Mr. St.J. D. Buxton.
Mr. Bristow, Mr. Fairbank, Dr. James B. Mennell, Mr. Slesinger, and others will take part in the discussion.

PATHOLOGY: at 8.30 P.M.
Laboratory meeting at Guy's Hospital, S.E.
Communications:
Dr. G. W. Nicholson: Heterotopic Squamous-celled Carcinomata.
Dr. C. P. Symonds: Pathology of a case of Disseminated Sclerosis.
Mr. A. A. Osman: Treatment of Nephritis with Alkalies.
Prof. J. W. Eyre and Dr. Ali: *B. Ægypticus*, Rough and Smooth Colonies.
Mr. W. W. Payne: A Note on Various Carbohydrate Foods.
Demonstrations will be announced at the meeting.

Wednesday, Dec. 2nd.

SURGERY: at 8.30 P.M.
Clinical and Pathological Evening:
Cases and specimens will be shown.

Thursday, Dec. 3rd.

OBSTETRICS AND GYNÆCOLOGY: at 8 P.M.
Specimens:
Dr. Everard Williams:
(1) Fallopian Tube containing a Loose Fragment of Menstruating Endometrium associated with Endometrioma of the Ovaries.
(2) Uterus showing Multiple Polypi of the Cervix.
Short Communications:
Dr. D. J. Malan:
(1) Gliosarcoma in a Full-time Stillborn Fœtus.
(2) Ruptured Acute Pyosalpinx during the Third Month of Pregnancy.
Papers on Puerperal Sepsis:
(1) Dr. H. J. Phillips: Rational Treatment of Puerperal Infections.
(2) Dr. L. Colebrook: Some Laboratory Investigations in Connexion with Puerperal Sepsis.

Friday, Dec. 4th.

LARYNGOLOGY: at 5 P.M. (Cases at 4 P.M.)
Cases will be shown by Mr. H. Bell Tawse, Mr. A. J. Wright, Mr. Douglas Guthrie, and others.

ANÆSTHETICS: at 8.30 P.M.
Paper:
Dr. M. S. Pembrey and Dr. F. E. Shipway: Apnœa, Dyspnœa, and Cyanosis in Relation to Anæsthesia.

Saturday, Dec. 5th.

OTOLOGY: at 10.30 A.M. (Cases at 9.45 A.M.)
Cases and Specimens:
Dr. Albert A. Gray and Dr. Sarah B. Nelson: Pathological and Anatomical Conditions found in a Case of Deaf-mutism (illustrated by lantern slides).
Other cases and specimens will be shown.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, W.
MONDAY, Nov. 30th, to SATURDAY, Dec. 5th.—Fellowship of Medicine lecture, Medical Society, 11, Chandos-st., W. Monday, 5.30 P.M., Mr. Herbert Tilley: Tuberculosis of Larynx.—INFANTS HOSPITAL, Vincent-square, S.W. Special Course, Lectures, and Demonstrations every afternoon. Friday, "Round Table" Consultation. Saturday, Visits to Model Pasteurising Plant, Willesden, and Nursery Training School, Hampstead Garden Suburb.—ROYAL WATERLOO HOSPITAL, Waterloo-road, S.E. Special Course in Medicine, Surgery, and Gynæcology. Lectures, Demonstrations, &c., will be given in the Out-patient Department and Wards.—WEST END HOSPITAL FOR NERVOUS DISEASES, Welbeck-street, W. Lecture-demonstrations illustrated by cases daily at 5 P.M.—LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. General Practitioners' Course, 4.30 to 6 P.M. (second week). All information as to fees, &c. from the Secretary.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.
THURSDAY, Dec. 3rd.—3 P.M., Mr. W. Ibbotson: Demonstration of Practical Tests for Vertigo. 4.15 P.M. (Clinical Meeting of the North-East London Clinical Society).
Daily: Clinics, Demonstrations, Wards, and Out-patient Department, General and Special Departments, Operations, &c.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn-road, W.C. 1.
FRIDAY, Dec. 4th.—4 P.M., Mr. Archer Ryland: Musculature of the Vocal Cords.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone-road, N.W.
THURSDAY, Dec. 3rd.—5 P.M., Mr. L. C. Rivett: Antepartum Hæmorrhage.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, 49, Leicester-square, W.C.
TUESDAY, Dec. 1st.—5 P.M., Dr. A. C. Roxburgh: Seborrhœa. Seborrhœic Dermatitis.
THURSDAY.—5 P.M., Dr. Haldin-Davis: Acne. Rosacea.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE COURSE.
TUESDAY, Dec. 1st.—4.15 P.M., Mr. W. R. Douglas: Ureteral Calculi.
FRIDAY.—4.15 P.M., Prof. J. Shaw Dunn: Recent Work on Renal Function.

JAMES MACKENZIE INSTITUTE FOR CLINICAL RESEARCH, St. Andrews.
TUESDAY, Dec. 1st.—4 P.M., Mr. M. Ramsay: The Ocular Complications of Diabetes.

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell-square, W.C.
WEDNESDAY, Dec. 2nd.—4 P.M., Dr. A. Helen A. Boyle: The Attainment of Nervous and Mental Health.

Appointments.

COHEN, H., M.D. Liverp., has been appointed Lecturer in Practical Therapeutics in the University of Liverpool.
MCFARLAND, B. L., M.B., Ch.B. Liverp., Honorary Assistant Orthopædic Surgeon to the Royal Liverpool Children's Hospital.

Vacancies.

For further information refer to the advertisement columns.

All Saints Hospital, Vauxhall Bridge-road, S.W.—Res. H.S. At rate of £200.
Birmingham and Midland Hospital for Skin and Urinary Diseases. Hon. Asst. P.
Birmingham Corporation Infectious Diseases Hospitals.—Scn. Asst. M.O. £500.
Birmingham, Queen's Hospital.—Anæsthetist, Obst. and Ophth. H.S. Also Cas. H.S. All at £70 to £100.
Bradford Royal Eye and Ear Hospital.—Res. H.S. £120.
Brighton, Hove, and Preston Dispensary, &c., 113, Queen's-road.—Hon. M.O.
Cairo, Memorial Ophthalmic Hospital, Giza.—Ophth. S. £E.1500.
Cambridge, Addenbrooke's Hospital.—H.S. £130.
Cardiff City Mental Hospital, Whitchurch, near Cardiff.—Locum Tenens. 7½ guineas weekly.
Cardiff, Welsh National School of Medicine.—Lecturer in Pathology. £750.
Chelsea Hospital for Women, Arthur-street, S.W.—Jun. H.S. At rate of £100.
Dumfries County Council.—Bacteriologist and Chemist. £650.
Essex County Council and U.D.C.'s of Grays Thurrock and Tilbury.—M.O.H. for U.D. of Grays Thurrock. £200. M.O.H. for U.D. of Tilbury. £200. And Asst. County M.O. for U.D. of Grays Thurrock, &c. £400.
Gloucestershire Royal Infirmary and Eye Institution.—Asst. H.S. At rate of £150.
Hampstead General and North-West London Hospital, Haverstock-hill, N.W.—H.S. and Cas. Surg. O. Each at rate of £100.
Hospital for Sick Children, Great Ormond-street, W.C.—H.S. and H.P. Each at rate of £50.
Iraq Health Department.—Two M.O.'s. Rs.1200.
Kirkcaldy Hospital.—Res. M.O. At rate of £125.
Leeds Maternity Hospital.—University Tutor in Obstetrics and Res. M.O. £300.
Manchester, Ancoats Hospital.—H.S. At rate of £100.
North Middlesex Hospital, Edmonton, N.—Res. M.O. £200.
Nottingham General Hospital.—Res. Cas. O. At rate of £200.
Rainhill, County Mental Hospital.—Temp. Asst. M.O. £7 7*s.* weekly.
Royal Free Hospital, Gray's Inn-road, W.C.—Surg. Reg. £200. Also Med. and Gynæcological Reg. £100.
St. Andrew's Hospital, Dollis Hill, N.W.—Hon. Asst. P. and Hon. Asst. Gynæcologist.
Salford Royal Hospital.—Res. Surg. O. £200.
Singapore, College of Medicine.—Prof. of Biochemistry and Prof. of Biology. Each $850–$1000.
Stockport, County Borough.—M.O.H. £1200.
University College Hospital, Gower-street, W.C.—Med. Reg. £150. Also Hon. Dental S.
Winchester, Royal Hampshire County Hospital.—H.S. £150.
Windsor, King Edward VII. Hospital.—Jun. H.S. At rate of £100.
York County Hospital.—H.P. £150.

Births, Marriages, and Deaths.

BIRTHS.

ALLERTON.—On Nov. 12th, the wife of George Allerton, *M.C.*, M.R.C.S., Longridge-road, S.W., of a daughter.
COWEN.—On Nov. 17th, at Stafford House, Church-road, Sutton, Surrey, the wife of Dr. E. G. Huxley Cowen, of a son.
NOBLE.—On Nov. 17th, at Hill Crest, Husbands Bosworth, Leicestershire, the wife of Dr. Noble, of a daughter.
STEWART.—On Nov. 10th, at Woodside, Leavesden, Herts, the wife of R. M. Stewart, M.D., of a daughter.
TRACE.—On Nov. 3rd, the wife of Laurence A. Trace, L.D.S. R.C.S., Kingsbridge, South Devon, of a daughter.

MARRIAGES.

SCOTT—RICHARDS.—On Nov. 12th, at St. Stephen's Church, Bournemouth, Dr. Maitland Scott, to Ursula, only daughter of Mrs. Richards, of Sunbury, St. Stephen's-road, Bournemouth.

DEATHS.

CANTON.—On Nov. 19th, at The Corner Cottage, Ventnor, Frederick Arthur Canton, L.D.S. R.C.S. Eng., of Ludham, Norfolk, aged 75.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

LONDON COUNTY COUNCIL SCHOOL MEDICAL AND DENTAL SERVICE.—The extent to which the school medical and dental service of the L.C.C. is developing may be gathered from the fact that the Council has made financial provision for treatment, during the year 1926–27, of no less than 35,000 cases of refraction and eye diseases, 14,680 ear, nose, and throat cases, 1500 cases of ringworm, 70,600 cases of minor ailments, and roughly 126,000 dental cases. These figures represent an increase of nearly 11,000 over the number of cases authorised for treatment in the current year. The medical services of the Council have recently been under review. It has been found that the large increase in the number of cases treated by the Council's doctors is largely due to the fact that the hospitals are experiencing difficulties, and are being used to a less extent than formerly in the case of ailments for which the Council provides treatment. It is stated that the in-patient centres for the treatment of tonsils and adenoids have become so popular that many parents now refuse immediate appointments for treatment of their children as hospital out-patients, and prefer to wait until they can secure treatment at one of the in-patient centres. More parents also now appreciate the importance of obtaining dental treatment for their children. The cost of the arrangements, apart from administrative charges, during the financial year is estimated at £94,827, which includes eye, ear, nose and throat (including ambulance), and ringworm, £22,298; minor ailments, £26,187; dental cases (treatment £39,604, inspection £3098), £42,702; maintenance grants (including Cyril Henry centre), £2260; allowances for use of centres for inspection purposes, £530; remedial exercises, £150; stammering classes, £200; and initial grants to new centres, £500.

Notes, Comments, and Abstracts.

THE TREATMENT OF ALCOHOLISM.

BY PAUL BOUSFIELD, M.R.C.S. ENG.,
FORMERLY PHYSICIAN TO THE LONDON NEUROLOGICAL CLINIC.

IT is nearly always the case that when an individual approaches the doctor on the subject of the treatment of his alcoholic craving he does so at a time when he is almost without any control of the habit; that is to say, he is either in the middle of a drinking bout or an exacerbation of his chronic state. His physical condition has, therefore, to be dealt with first, so that we may confidently divide our treatment under two headings, physical and psychic.

Physical Treatment.

The physical treatment assists in substituting for the alcoholic euphoria a feeling of well-being without narcotising the brain. It also helps to eliminate the gastritis, which is one of the chief factors in driving the patient towards an early resource to alcohol on the day after he has taken excess, and which, thus, leads to a continued state of excess. It is not necessary to forbid alcohol completely at once. As a rule, however, it should be reduced and left off after two days' treatment, though in some cases it will be found better to immediately discontinue it. Although the treatment can be carried out at home, the patient should preferably be placed in a nursing home for from four to seven days. If the gastritis and general malaise are very bad it is well for the patient to remain in bed for the first 24 or 48 hours. Cheerful companionship is a great accessory, and if it can be afforded a special nurse of bright disposition or some other companion should be constantly available during the short stay in the home.

If the condition is very bad, and the patient comes in with a stomach loaded with alcohol, gr. 1/10 of apomorphine hydrochloride should be given hypodermically if the heart be in fair condition. This has a twofold object: it will probably induce vomiting, but, more important, it will probably give the patient a good long sleep. For apomorphine is a hypnotic of the greatest value in alcoholism. Further doses, 1/30 gr. to 1/20 gr., may be given at intervals of six to eight hours, and one of these doses should be given immediately before the patient retires to rest for the night. On the second day a small dose of apomorphine may be given in the morning and another at bed-time. These small doses will not induce vomiting except in rare instances. If a small dose does produce vomiting it must be discontinued and some other hypnotic substituted. Hyoscyanine sulphate followed by a full dose of potassium bromide is an excellent combination under these circumstances. As soon as the patient commences treatment he should be given a mixture such as will combine a general tonic with a stomachic and will simultaneously reduce his physical craving for alcohol. The best mixture to employ is probably the following, given at intervals of two hours and a half to three hours six times daily:—

Liq. atrop. sulph.	♏ ¼.
Liq. strychnin.	♏ i.
Tr. cinchonæ co.	ʒss.
Glycerin.	ʒss.
Inf. gent. co. .. ..ad.	℥ss.

After four days this atropine mixture should be discontinued, and a mixture somewhat similar to the following substituted, and ʒi. given two-hourly in a wineglass of water:—

Ext. cascara liq.	♏ x.
Tr. cinchonæ co.	ʒss.
Aloin.	gr. 1/16.
Liq. strych. hydrochlor.	♏ iii.
Inf. gent. co. .. ..ad.	ʒi.

This may well be varied after a week to the following:—

Ext. cascara liq.	♏ iii.
Aloin.	gr. 1/16.
Tr. cinchonæ co.	ʒss.
Inf. quassia (conc. 1–7)	♏ vii.ss.
Inf. gent. co. .. ..ad.	ʒi.

Colloidal Gold.

The remaining part of the physical treatment is empirical. It consists in giving 2 c.cm. per diem of isotonic colloidal gold. As a control the author has tested this on many occasions against different inert isotonic solutions similarly coloured without letting the patients know it, and the tests have left no doubt in his mind that those treated with gold picked up more rapidly, and were more successful, than the others. The dose of gold should be divided into three parts and given after each meal. It should be started as soon as the patient enters the nursing home and continued for three weeks. It is important that both the gold and the tonics should be divided up into frequent doses, for this rather burdensome method of treatment has a very considerable moral effect in assisting the patient to remove his fears from immediate relapse. After the first four or five days the actual desire for alcohol has ceased, but the fear of the desire does not disappear until experience has shown the patient how easy it is to abstain. This fear is a most potent form of tension acting as a cause for continued alcoholism. If at this stage the patient is solemnly warned not to touch alcohol again under any circumstances a fair proportion will be freed from its slavery. Unfortunately, however, conditions of tension will recur, which if they are not understood and controlled by the patient will cause a relapse. Probably rather more than 50 per cent. of the patients cured by this method do relapse.

Psychotherapy.

A much greater percentage of permanent cures is established when we add to this physical treatment some form of psychotherapy. As to suggestion it is almost impossible to make its effects last a long period against permanent tensions, although, of course, indirect suggestion plays a part in the physical method. Where alcoholism partakes of the nature of hysteria, or compulsion hysteria, or is symbolic in some way or other of an unconscious conflict, there is sometimes a very difficult proposition to face, which only a lengthy psychological analysis is likely to solve. It is amongst these patients that most of the failures occur, for many of them are not suitable for, and cannot enter into, analytical procedure.

But the vast majority of cases suffer from what may be termed a series of normal tensions, which they do not recognise as such consciously, but which are very near the surface, and can be fairly rapidly brought to light by a much more superficial form of analysis directed essentially to a minute examination into the history of his alcoholism, including an examination into the various emotional states of his mind which were present on various occasions when alcohol was taken. An example may be of value here.

An Example.

A civil engineer, aged 35, complained that he suffered from chronic alcoholism, and that it was hereditary in his family. He had suffered from it for 12 years, and had already undergone two forms of treatment for it. One of these had been at the Norwood Sanatorium and the other at the Keely Institute. After the first treatment he had been an abstainer for six months, and then considered himself safe, but a single drink was immediately followed by three months heavy drinking daily. He then went into the other institution, and on his discharge succeeded in maintaining three months' abstinence, when he had another relapse which lasted four months, after which period he came to me for further consultation. He was placed in a nursing home for five days, and the physical treatment already described was instituted. Simultaneously, a minute investigation into the history of his alcoholism was commenced. Various kinds of impatience were almost always the starting-point for his taking alcohol. Thus, if he had to wait an hour for a message to be delivered he would find the tension of waiting intolerable. If he had a long journey to make, the idea of the boredom of wasting several hours before he could get to the end of it had a similar effect. To arrive home half an hour before dinner with no fixed programme of work to fill up that time was another source of tension which he could not bear. Loneliness was another cause of unpleasant stimuli. He liked working with three or four people around, and analysis showed that the reason of this was in order that his work might receive continual attention and praise, and under these circumstances only could he really enjoy his work. There were a large number of similar conditions which aroused more tension in this individual than they did in the average person, or, in other words, this patient was too intolerant of these conditions. Other factors which made him drink heavily, when the first exciting stimuli had passed, were the fear of the ultimate consequences of his habit and the fear that he would never be cured. He was an example of the type that drinks in order to abolish the fear of drinking.

During this investigation, which took about eight weeks, the patient was taught to consider the various points, and to give himself well-considered suggestions night and morning directed towards his habits of impatience and exhibitionism (in his work and so forth). The suggestions were not directed towards eradicating his alcoholic habit, but towards his control of the underlying tension. He was daily impressed by the physician with the needlessness of fear concerning alcohol, and the fact that if he could entirely eliminate his desire for it in a few days in a nursing home he could certainly do the same for himself on any future occasion. He was disabused of the idea that alcohol was

hereditary, and he was told that at the end of the treatment he must entirely use his own judgment as to whether he attempted to take alcohol again or not. If he did so and found that he had not got complete control, he must come back at once for a little further investigation of the particular circumstances which were causing him tension which he could not face. He did, in fact, have one or two short relapses for a few days each, but after a little further investigation he succeeded in pulling himself up short and curing himself by means of a little introspection and auto-suggestion on each occasion. He has now reached the stage in which he regularly has alcoholic beverages on his dinner-table, which, however, he scarcely ever touches. And he had not had a relapse of any kind for two years.

Conclusion.

Many cases are not so simple as this, and many patients cannot afford the time for the necessary analytic procedure. In such cases, however, although frequent minor relapses may take place, the patient is nearly always in a position to cure himself by taking a week-end holiday of three days with a suitable companion. In other words, he has sufficient confidence in himself to know that if he can put behind him for a short period the tensions of home life and business he can overcome, without the aid of a physician, the gastric tension and general malaise which are the chief causes in the continuation of a bout of drinking. A frequent cause of the beginning of a bout in these minor relapses is undischarged sexual tension. If for any reason this is raised and cannot be discharged, an individual who has been prone to alcoholism tends naturally to the old habit-path which has been formed in order to avoid the tension, although he may not be fully aware that the tension is present.

COLONIAL HEALTH REPORTS.

UNFEDERATED MALAY STATES.

Kedah.—The report of Mr. W. Peel, British Adviser, for 1924 gives the estimated population at 350,000. The birth-rate per mille was 31·70 and the death-rate 22·41. There was considerable improvement in infantile mortality, the rate being 126·27 per mille, as against 161·73 in the previous year. The number of deaths was 7877, of which 3459 were attributed to fever, but the returns are not very reliable. The only accurate figures are those for the hospitals. Eight Government hospitals were maintained and 13,657 patients treated therein. The principal diseases were malaria, venereal disease, ankylostomiasis, dysentery, pulmonary tuberculosis, and respiratory diseases. There was a marked increase in the number of dysentery cases, but the death-rate was considerably less. In addition to the outdoor departments at the hospitals, there are seven Government outdoor dispensaries; they did good work, the number of cases treated being 18,698. Small outbreaks of small-pox occurred in different parts of the State, involving 26 cases and 3 deaths; the outbreaks were quickly controlled. 7620 injections of neosalvarsan were given for puru (yaws), as against 1183 in the previous year; the people show eagerness for this treatment. There was a decrease in the number of deaths due to diseases connected with childbirth, but the prejudice against competent medical assistance in such cases remains very strong. 20 lepers were being maintained at the end of the year at Pulan Jerejak and 5 at Pulan Pangkor Laut. The accommodation at these places is limited, and 30 patients were awaiting vacancies at the end of the year. The position with regard to lepers is not satisfactory, and it may become necessary to consider one central camp for the State. Dr. D. Bridger officiated as State surgeon throughout the year. Dr. J. T. Clarke and Dr. R. B. Hawes acted as medical officers for Kulim and Sungei Patani respectively. Dr. C. J. S. Nicholas, assistant surgeon, officiated in the post of medical officer at Alor Star. A separate health department was maintained, Dr. A. G. H. Smart being in charge until he went on leave.

Trengganu.—This is a Malay State on the east coast of the Malay Peninsula. Its configuration is long and narrow, the length being approximately 150 miles and the greatest breadth 55 miles. The western and inland half is mountainous and almost uninhabited. The population is concentrated in the eastern half of the State, along the river-plains and coastal belt. The population at the census of 1921 was 153,765, of whom 145,523 were Malays, 7246 Chinese, 211 Indians, 34 Europeans, and other nationalities 751. The highest recorded annual rainfall on the coast is 165·5 inches; the average rainfall is about 120 inches. In the coastal region the regular sea and land breezes modify the heat, which is never at any time oppressive, and the climate is both pleasant and healthy. Mr. J. L. Humphreys, the British Adviser, in his report for 1924, states that Dr. A. B. Jesser-Coope (medical officer) and Mr. Ibrahim Syed Noor (assistant medical officer) were in charge throughout the year, with a staff of eight dressers and apprentice dressers. The department was transferred in February to the completed new administrative buildings; they include store, dispensary, dressing-rooms, laboratory, and a well-equipped operating theatre. The hospital ward was completed and brought into operation in May; the second ward was completed in November; 158 cases were treated in the hospital during the year. Two major and 35 minor surgical operations were performed, and 1147 clinical pathological examinations made. Lunatic cells, a leper ward, and a vagrants' ward are under construction. The total area of the medical department reserve is approximately 18 acres of land; the site is open sandy ground, just outside town limits, and within half a mile of the sea. The commissioner of police made arrangements for the distribution through 15 police stations of drugs for simple ailments (fever, wounds, worms, sores), and a Jawi booklet of instruction on common matters of sanitation, hygiene, and infant feeding was published during the year. It is hoped that these measures will encourage the use of European medicines and help to bring the medical department more into touch with the general population. No vital statistics can be given. Of general diseases treated the more prevalent were skin diseases, intestinal worms, bacillary dysentery, diseases of respiration, yaws, and influenza. Venereal disease is not common; many cases formerly thought to be tertiary syphilis are now considered to be tertiary yaws. There was no epidemic at Kuala Trengganu during the year. There were epidemics of influenza at Kretai in July, and of bacillary dysentery at Kuala Brang in August; they were cleared up with aid sent from Kuala Trengganu. The vaccination campaign was continued during the year, 12,890 cases being successfully treated (19,750 in 1923). At the end of the year the vaccination of the whole State was completed, except for Hulu Marang and Telemong, where some opposition from religious pundits was again met with.

Perlis.—In 1924, 851 births were registered, comprising 750 Malays, 28 Siamese, 69 Chinese, 3 Tamils, and 1 Sikh. The deaths numbered 585. The number of indoor patients in the Kangar hospital was 549, and the percentage of deaths was 6·57; or, if deaths occurring within 48 hours of admission are excluded, 4·91. The daily average of in-patients was 37·46. The principal diseases treated were malaria, dysentery, phthisis, other lung complaints, ankylostomiasis, syphilis, and ulcers. The number of out-patients rose from 11,991 to 12,543. It is satisfactory to observe that Malays are taking outdoor treatment very freely. A travelling dispensary was started during the year. It distributes quinine, treats ulcers and other simple complaints, and is well patronised. Neosalvarsan injections numbered 3409, against 2027 in the previous year.

INSECTS AND PUBLIC HEALTH.

ON Nov. 18th Sir Wilfred Beveridge delivered a Chadwick Public Lecture at the Royal Society of Medicine on Insects in Relation to Public Health. Sir James Crichton-Browne occupied the chair. After referring to the general educative value of the study of insect life, Sir Wilfred Beveridge said that training in entomology was very desirable for every medical man. To be of real value this training should be of such wide scope as to confer the true entomological sense, which enables the student to tackle any new problem which may arise. The chief function of insects in nature, he said, appears to be the destruction of waste and putrescent organic matter and the suppression of superabundant vegetation. At the present time we devote much attention to the destruction of the house-fly and the carrion flies because they can under some circumstances transmit certain disease germs; but if man took the proper precautions as to the disposal of infected excreta and the protection of food, the fly would not be in the unfortunate position of being a disease carrier. We should so regulate our sanitary efforts as to make the insect carrier a negligible factor in the transmission of disease, and not concentrate all our energy in destroying insect life, while failing to put our own house in order. The presence of lice was one of the many trials of the war, and great temporary loss of man power was caused by trench fever, a disease new to active service in the field, which was definitely proved to be transmitted by the louse, and the louse only. It was estimated that at least 50 per cent. of the total sick admissions among troops in the line was primarily due to the presence of vermin, and arrangements have now been made to provide mobile laundries and bathing units for an army in the field, so that in future wars the men with care should be kept entirely free from vermin. Unfortunately, however, vermin are only too common in the civil population, though by the avoidance of overcrowding and the observance of ordinary cleanliness they can be eradicated entirely.

It is quite possible that the list of insects now known to be responsible for transmitting disease will be increased, and a closer study of many household insect pests certainly appears desirable. It has been estimated in the United

States of America that the loss of labour by all insect diseases costs the country over 300,000,000 dollars each year. During the war demands for repellants against lice, mosquitoes, and sand flies were constant and pressing, and the result of trials in many theatres of war left a feeling of doubt as to their practical value; many of them were very expensive and some difficult to obtain. To sift the problem properly, and to extricate from a mass of substances expected to act as efficient insecticides and repellants those which are reliable and effective under conditions of service in various countries, it would be necessary to institute an experimental station, where the various necessary insects can be bred and maintained, so as to determine the value and action of insecticides and repellants, not only from a personal but also from an economic point of view. The bed-rock of control, said Sir Wilfred Beveridge, is efficient sanitation. The protection of food during manufacture and on exposure for sale is greatly neglected both in this country and abroad. Food is exposed to contamination by flies in shops and on the streets, in kitchens and stores, with little attempt at protection. In America, Canada, and Australia regulations are in force to prevent the contamination of food by exposure, and no food is allowed to be exposed for sale unless screened by glass or gauze. In houses the protection of food is a simple matter. The provision of screened meat safes, the screening of our store-rooms and kitchens, and the use of gauze coverings for cooked food set aside, such as those now sold as "fly foilers," is not an expensive matter and should never be neglected.

CHILD WELFARE PROPAGANDA.

A MEETING of the National Baby Week Council was held at Carnegie House on Nov. 18th, the chair being taken by Dr. W. J. Howarth in the absence of Prof. Bostock Hill. The subject for discussion was Propaganda by Local Authorities: Ways, Means, and Costs, and Dr. Howarth said that under the new Public Health Act local authorities were empowered to spend money on health propaganda, thus opening up opportunities not available hitherto. Dr. W. Allen Daley (M.O.H., Kingston-upon-Hull) spoke of various methods of health propaganda. Newspaper publicity was perhaps the most valuable, as nearly every home possessed one diligent reader of the paper who handed on news to the others and stored up information for future use. Health bulletins issued by public health departments were useful, but could only be afforded by the larger authorities. There was need for a central committee to act as a publicity and information bureau, to standardise the publications issued, so that none might show serious deviation from the general consensus of medical opinion. At a cost of from £10 to £20 a lecture, and by securing really good lecturers, Dr. Daley had found it possible to collect audiences of from 1000 to 3000, the most popular lectures being those illustrated by films. Health talks by panel doctors to their patients would be a paying proposition, and two doctors in Hull were adopting this plan. Posters were costly but useful, and broadcasting, health week exhibitions, and education of school-children were all valuable. Dr. James Fenton (M.O.H., Kensington) called attention to the fact that London was not included in the provisions of Section 67 of the Public Health Act. London boroughs did not enjoy the local patriotism enjoyed by towns, and the difficulty was rather to attract audiences than to obtain good lecturers. The ideal was to use the infant welfare centres as propaganda units and to make them educational centres. The Kensington Council had just appointed a whole-time woman lecturer, approved by the Ministry of Health, but, until the new Act applied to London, she would have to confine her efforts to maternity and child welfare. Groups of people considered by members of the audience to be in need of health education included municipal councillors, corporation officials—policemen, tramwaymen, and the like—and adolescent boys and girls.

A VISITING LIST FOR 1926.

Smith's Physicians and Surgeons' Visiting List,[1] consisting of diary, almanac, and book of engagements for 1926, appears this year for the eightieth time. A pocket-book which has not only satisfied three generations of practitioners, but has been modified by their friendly criticisms and has been constantly kept up to date in form, contents, and spacing carries its own recommendation. After the diary, which takes up the bulk of the book, come special sections for obstetric and vaccination engagements, memoranda, bills and accounts asked for, addresses of patients and of nurses, drugs and instruments wanted, and finally a list of things lent with space for name and address of the borrower. A medical man who uses the facilities here provided to their fullest extent cannot fail to profit by their methodical arrangement.

[1] Smith's Medical Visiting Lists for 1926. London: Hazell, Watson & Viney, Ld., 52, Long Acre, London, W.C. Price, No. 3 for 75 patients (with journal), cloth 7s. 6d., leather 10s. 6d.: No. 4 for 100 patients (without journal), cloth 10s., leather 12s.

MALARIAL TOXIN.

Dr. I. Pentman, writing from the Pathological Institute at Omsk [1] in Western Siberia, relates the case of a boy of 10 who died comatose in a relapse of tertian (benign) malaria. Post-mortem examination showed that he had no other disease, and only *P. vivax* was found in his blood. There was degeneration and proliferation of the endothelium of the blood-vessels of the brain, also small hæmorrhages in the medulla and elsewhere, which accounted for the clinical symptoms. Dr. Pentman attributes this alteration of the endothelial cells to a definite malarial toxin, quoting in his support Pewnitsky (1903) and also Dürck in the German Medical History of the War. This toxin, even in quite acute cases, may cause waxy change in the kidneys and spleen, but not in the liver.

ROAD WISDOM.

THE familiar maxims known as "Pratt-itudes of the Road," which have recently appeared in the press, have been collected into a neat pamphlet under the title of "Road Wisdom," together with hints on garages, traffic driving, gear changing, and other subjects by expert motorists. The courtesy of the road still leaves something to be desired, and the little book contains useful reminders of road ethics. It may be had free on application to the Anglo-American Oil Co., Ltd., at 36, Queen Anne's-gate, London, S.W. 1.

A MISSION HOSPITAL IN NORTH CHINA.

THE Mosse Memorial Hospital at Ta Tung Fu, Shan Si, North China, was built as a memorial to the Rev. E. H. Mosse, who was killed by a bomb during an air raid in the neighbourhood of Covent Garden in 1918. The first annual report, dated 1924, is addressed to medical men and shows that during the year 1896 men and 568 women were treated as out-patients, a total of 2464 with return visits of 4272, making a total of 6736 attendances. There were 396 in-patients, of whom 329 were men and 67 women. Several cases necessitated abdominal surgery and there was a large amount of surgical tuberculosis, though the results of treatment in this last category were very poor. Trachoma, as might be expected, formed the bulk of the eye patients. The majority of operations were done under local or sacral anæsthesia, the latter for rectal operations. Severe rickets and osteomalacia are common and severe in the out-patient department, where syphilis is found to be widespread and the treatment of gonorrhœa is unsatisfactory as patients do not persevere. Most skin cases are syphilitic and scabies is frequent. The staff consists at present of Dr. D. S. Bryan-Brown, Dr. G. A. M. Hall, and a nursing sister with native assistants. A nursing school is in prospect.

QUICK REFERENCE.

TIRESOME as they may sometimes be, statistics are indispensable; they are the social worker's raw material, and they furnish the test of progress. The Permanent Consultative Committee on Official Statistics, set up by the Treasury in 1921, has just produced its third annual survey, covering the contents of all the official publications of 1924 and of some of those of 1925. The new volume[2] consists of two sections. The first and larger is a subject index with a comprehensive system of subheads and cross-references. The guide covers the whole field of official activities, from accidents and afforestation to women police and wrecks, but one has only to glance at titles such as children, deaths, disease, health, and so on, to see what valuable compilations of statistics are available of a kind likely to interest the medical profession. There are also of course, more specialised headings, such as factories and workshops, industrial fatigue, prostitution, vaccination and workmen's compensation—to name a few samples taken almost at random—which indicate the varied nature of the mass of information which our blue-books and other official publications contain. The second section comprises a list of those publications to which the subject index has referred. Medical practitioners and students of public health administration have seldom the leisure to read and digest the colossal output of departmental reports and returns, census figures, Royal Commissions' reports, and similar literature which H.M. Stationery Office pours forth. The less time they have, the more valuable is such a guide as this.

[1] Arch. f. Schiffs- u. Tropen-Hygiene, September, 1925.

[2] Guide to Current Official Statistics of the United Kingdom, Voume III. (1924). London: H.M. Stationery Office. 1925. Pp. 249. 1s.

CHEYNE HOSPITAL FOR CHILDREN.—An exhibition and auction sale of oil and water colour paintings, drawings, engravings, jewellery, &c., in aid of the Cheyne Hospital for Children last week realised £750.